OCTOBER • 1961

FIREMEN

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Fire on Arrival — *see page 7*

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66th year

DWELLING INSPECTION PROGRAMS - - page 8

THE GREAT BOSTON FIRE OF 1872 - - page 16

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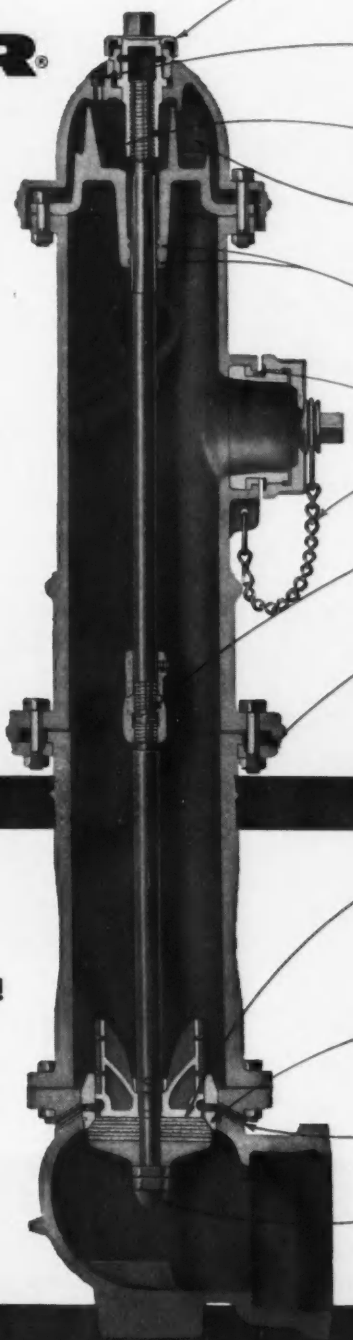

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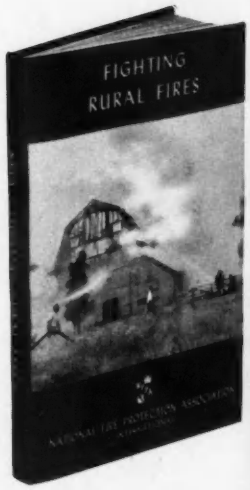
"FIGHTING RURAL FIRES"

This book was written especially for the interest and guidance of small fire departments in rural areas. Prepared by the Subcommittee on Fire Departments of the NFPA Committee on Rural Fire Protection, it presents a large variety of information on fire fighting operations, equipment and fire prevention.



129 pages, illustrated
5¾ by 8¾ inches, clothbound

Fighting Rural Fires will be particularly useful to the small or newly formed fire department. The text was prepared by a committee of volunteer fire chiefs, and fire protection and fire training authorities who have worked with fire departments in rural areas for many years.

As shown in the Table of Contents at right, the book covers many aspects of the fire problem as well as the fire department operations which are essential for efficient response to alarms and fire control. Special attention is given to the placement of apparatus, the use of hand lines, interior fire fighting, rescue and overhauling, and making the best use of water supply in the rural area.

Of particular help to the modern volunteer fire department will be the chapter on inspections, which gives considerable attention to pre-fire planning of major target hazards. The selection, purchase and use of fire apparatus and equipment is also covered extensively in this book.

Because there are so many aspects to the rural fire problem, *Fighting Rural Fires* contains a reference list of the sources of detailed information on pertinent subjects, including those which are important to firemen's training.

If your fire department operates in a rural area, *Fighting Rural Fires* should be available for study by each fire fighter. You can order a copy today with the convenient order blank below.

$3.50 per copy

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FIREMEN

Volume 28 Number 10

A monthly magazine published for the fire service members of the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

FIREMEN magazine is available only through membership in the NFPA. Complete details on membership can be obtained by writing to the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

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It is not generally appreciated that the fire department protecting a rural area can encounter some of the most difficult fire control problems. The involved structure or area may not be as large, as complex, or as valuable as those to which municipal fire departments respond, but the job of fire control and extinguishment with available water supply, manpower and equipment can be tremendous.

Consider the photo on this month's cover. This is what confronted Auburn, Maine, fire fighters on August 8 as first-responding companies pulled up to these 2- to 3-story barn buildings. The flaming wood frame structure, 85 feet long, 45 feet high, and 40 feet wide, contained 200 tons of hay and was attached to a 2-story, flat-roofed structure which held 50 tons of hay plus milk compressors and new milk coolers valued at $6,000. Two other barn buildings were attached to this.

The fire had been going about ten minutes before discovery by the farm operator who telephoned an alarm, then tried to hold the fire with a garden hose. Initial burning was on top of the baled hay near the ridgepole and was impossible to control with a small line.

While getting hose streams into action, Auburn fire fighters managed to get 36 cows, 3 bulls and 6 calves out of the barn and into a pasture, set up a 5-pump relay from a water source 3,000 feet away, and cut their way into the middle two-story, flat-roofed barn. Here they spread salvage covers over the milk compressors and coolers and kept this area wet with a 1½-inch line. Despite the intense fire in the biggest barn, they stopped the spread at the junction of the two buildings. The hay in the two-story barn was continually wetted with hose streams as it was thrown into the yard below.

This is an excellent example of a "good stop" under tough conditions. According to Chief J. Coleman Miller who commands the Auburn Fire Department, the farm owner had his milk compressors and coolers in operation shortly after the fire was extinguished. Loss on the large barn, which burned completely, was estimated at $50,000, but it could have been much greater without good fire fighting. Engine companies from Lewiston and McFalls assisted on mutual aid.

Incidentally, speaking of rural fire fighting, note the announcement on page 6 of this issue. (*Cover photo by Lewiston "Sun-Journal".*)

Mayor Robert F. Wagner of New York City recently announced a 40-hour work week for fire fighters, police and certain other uniformed city employees. What is unusual is not the 40-hour work week, which has been in effect, but the fact that 40 hours cannot be exceeded in any one consecutive 7-day period, even if the work week is made to average out in the course of a year. This was the decision of a Supreme Court Justice in response to a petition of two police patrolmen who protested duty schedules that made them work six consecutive 8-hour tours. The court also ruled that, according to law, the 40-hour week (five 8-hour days) had to be worked on a 3-platoon system and not a 4-platoon system.

If the laws affecting working hours of fire fighters in other areas are similarly interpreted to prohibit averaging out of the work week over a period of time (or cycle), it could upset present practices in a number of localities. In many fire departments the platoon on night duty works 14- or 15-hour tours and considerably exceeds the statutory work week, but the time off is made up by a 9- or 10-hour day tour. For example, suppose a fire department works a 60-hour week with five 14-hour night shifts (70 hours) one week and five 10-hour day shifts (50 hours) the next. If it was ruled that not over 60 hours could be worked in one week, it would be possible to have only four 14-hour night shifts, or 12-hour shifts would have to be arranged for both day and night.

In an effort to provide sufficient manpower for the uniformed forces in New York City until additional men can be recruited and trained, members are to be given the opportunity to volunteer for overtime work at additional pay.

WARREN Y. KIMBALL, Managing Editor; PAUL R. LYONS, Editor; HENRY S. GERE, Advertising Manager; ROWENA D. DORES, Editorial Assistant; SHIRLEY TOBEY, Fire Service Department; VIRGINIA STILES, Advertising Department.

Timely Opinions on

DWELLING INSPECTION PROGRAMS

Excerpts from talks given at the NFPA Annual Meeting in Detroit, Michigan

Preparing the fire department for home inspections

by Chief Clay A. Easterly, Martinsville, Virginia

ABOUT ten years ago we started the promotion of home inspections. From the beginning there was rigid opposition from "bell listener" firemen, which required a slow and patient approach until the morale of the minority resisting group improved.

Our first step toward initiation of the home inspection plan was to teach our firemen complete detail relative to legal aspects of entering a person's home. In the Commonwealth of Virginia inspectors cannot enter a home for any type of inspection unless there is a positive, expressed invitation by the occupant. We devoted considerable time to this phase of personnel training before any man went on a tour of inspection. This helped to eliminate doubt and confusion among our personnel in the early stages of the program. The following regulations are observed by the Martinsville Fire Department:

(1) No entry is made into any dwelling without definite expressed permission from an adult occupant.
(2) An adult must be present when any inspection is made of a private residence.
(3) The owner or occupant is carefully advised that our comments on corrections are strictly suggestions and there are no enforcement follow-ups.
(4) There will not be any public comment by the inspectors relative to an observation in any home.
(5) There will not be any release of information to either the news channels or insurance carriers.
(6) The office files on home inspections are strictly confidential and are not open to the public for any purpose.
(7) An inspector will not testify in court on facts obtained in the procedure of home inspections.

From the start our program has had strong local government support. The outline for the program with its objectives was cleared with local government long before any approach was made to the men who would actually do the field work.

Once the approval of the local government had been expressed, we were in a much better position to approach our personnel.

In the beginning, much thought was given to the importance of teaching the correct technique of inspecting. Of paramount concern is the personal aspect of the problem. In training men for home inspection, it is of utmost importance this factor be given careful consideration. Therefore, it has been a sound approach to emphasize two principles: *First*, how to approach the occupant in making a report for suggested improvements. *Second*, the correct procedures of inspection.

We must bear in mind that, in a dwelling inspection, our men are invited into a private home for which there are no ordinances requiring that our recommendations be carried out. Yet, it is quite important the homeowner be sold on the idea of carrying out our suggestions. We believe the following to be very important techniques:

Courteous approach on all inspections.

Make it evident that we are aware that we are in the home by invitation.

Our primary interest is preventing a fire which could take the lives of the occupant and destroy the home.

Any comment is constructive and intended for improvement of what may be a hazardous condition.

Under no circumstances is any comment to be regarded as personal criticism of any member of the family.

As far as the inspector is concerned, the inspection is a confidential matter.

Gossip will not be tolerated and the men are constantly reminded of this regulation.

Under no circumstances will any conditions noted on a tour be made available to an insurance carrier, repair service organization, sales promotion groups, or in any form of publicity which would identify a given home.

Many factors could be included in a summary of our inspection procedures, but the following are among the more important:

(1) The location of hazards in the home.
(2) Dangerous storage problems.
(3) The common hazards of heating plants.
(4) The misuse or overloading of electric systems.
(5) The possibility and prevention of spontaneous ignition.
(6) Improper use of flammable liquids in the home.
(7) How to report a fire properly.

(8) Introduction and practice of plans for fire drills and evacuation for occupants of the home.

Special training in the suggested procedures will serve to improve a fireman's technique and will give him confidence when he approaches a home for a residential inspection.

In our local program, during the first three years, there was not too much indication of any appreciable change in the average of fire losses and number of alarms. We did not let the lack of evidence in improvement lead to abandonment of the program. If anything, more effort was put into the project.

There was a very definite trend which began to be quite evident in 1957. We could see considerable progress at the close of the year's activities, although there was not enough change to warrant any concrete conclusions. The subsequent years have disclosed facts on which some basic conclusions may be placed. The following figures have been taken from official records of the fire department.

	1958	*1959*	*1960*
Total fire alarms	301	294	219
Residence fire alarms	166	103	73

	First Quarter	
	1960	*1961*
Total fire alarms	70	52
Residential fire alarms	29	17

The percentages for the three years are quite in contrast with the national trends which are somewhat on the upgrade. The residential fire losses during the same period of alarm decline decreased comparable to the percentage of alarm experience. We feel quite confident our program is well worth promoting.

Preparing the public for home inspections

by Chief Edward B. McCabe, Milwaukee

THE success of a home inspection program hinges on the confidence, trust and respect which the people of the community have for their fire department.

Every fire department should realize the value of public acceptance. It is not achieved through "black magic" but by a sound *policy*, bolstered by satisfactory *performance*, cemented with adequate and accurate *reporting*. A sound policy begins when the rules and regulations of the department reflect the sense of responsibility the department administration has in satisfying the public interest.

A fire department must also maintain an "ear to the ground" to interpret reactions by listening to expressions of public thinking, watching public acts and deciphering public misunderstanding. If this is done a department can adjust its policy and programs to keep them compatible with the ever-changing needs and desires of the people.

Probably the biggest factor in winning and maintaining support is responsible performance. No fire department can expect to convince anyone that what it is doing is in the interest of all concerned unless it has demonstrated that it merits support through operational efficiency, reliability and dependability. A fire department must also give evidence that it is constantly trying to provide better service with a sincere concern for the well-being of everyone in the community.

The third vital ingredient in garnering public support is the reporting of what you are doing and what you are prepared to do. Information must be communicated clearly, creatively and, above all, continuously, in terms the public will understand.

Any department applying the principles of good relationship establishes a favorable organizational image — a mental picture of what a person thinks of when the fire department comes to his attention. Your men will sense it the moment they are greeted at the door. If the householder's knowledge and experience with the fire department has been good, it will be reflected in his desire to cooperate; if unfavorable, the inspector will be confronted with indifference or hostility.

Some fire departments have attempted to build a reservoir of support only to fall victim to certain pitfalls. The five most common are:

"The name on the door." A single individual is assigned the job while everyone else including the chief dismisses the matter from his mind. Generally, the unfortunate assigned is so busy in counteraction that little time is left for a positive approach.

The "closed mind" pitfall is an attitude of "we're the experts." Smugness is the surest way to alienate the public. Uncoerced compliance and cooperation will result if the person understands the need for regulation.

The "great stone face" is a term used to define the department which insists upon "hiding its light under a bushel." You have to give the people something favorable to talk about.

Another, and probably the most common, pitfall is the "adding machine." This is the popular habit of measuring and reporting everything you do with a long string of numbers. Any fire department guilty of this is building its house on sand. Statistics are pliable enough to be molded for any advantage and seldom withstand examination.

The last of our five is "capitulation." It characterizes the department which yields to every public demand. A fire official must know when to say yes and when to say no in the interest of the majority.

If a fire department avoids these pitfalls and has cultivated respect and confidence, the lion's share of preparing the public for home inspections is completed.

Assuming that the home inspection plan has been drafted, timing becomes a key factor. Sufficient time should be allotted to acquaint the public with the program. The fire department will be helped immeasurably if the program is introduced at a time when it can be reinforced by related instances. Attention

directed to disastrous fires will bring the value of home inspections into sharp focus, and the closer to home geographically, the more effective the reaction.

Time should also be taken to evaluate attitudes during the period of education. Signposts along the way may indicate an entirely different method of approach. Recently, a department decided on evening inspections to be sure of the householder's presence when the inspector called. Experience proved that most people considered an inspection at this time an intrusion on family privacy, and the department had to abandon the plan. An evaluation of reactions to such a plan during the period of education would very likely have saved this department some embarrassment.

Support should be solicited from the public. First and foremost, have the names of the community's public opinion molders associated prominently with the program. Public and private agencies, educational and religious institutions, should also be called upon to express their endorsement of what the fire department is doing. The objective of the fire department should be, of course, to get every man, woman and child behind its program.

To reach the people will require the use of all mass communication media. Newspapers, radio and television are the major sources and, if these facilities are available, the manner in which they can be used is limited only by one's imagination. There are also means such as the distribution of literature, speakers' bureau, displays and exhibits.

Much harm is dealt any subsequent inspection program if a department should ignore its post-inspection responsibility to acquaint the public with the result of the project. Not only should a flow of information start prior to the actual inspections and continue during the inspection period, but it should not die abruptly as soon as the campaign is over. Follow-up reports are the start in preparing the public for the next home inspection program. These reports should be made immediately after the facts have been gathered.

Volunteer fire departments can inspect homes, too!

by Chief David B. Gratz, Silver Spring, Maryland

IT IS gratifying to report that the volunteer fire service is playing an important role in reducing the tragic loss of life and property in dwellings.

Many volunteer departments, large and small, have undertaken dwelling inspections with very satisfactory results. With proper planning and execution *any* volunteer department can carry out this project.

Basically the development of a home inspection program is the same for a volunteer department or a paid department. The first stage is the preparation of the program, which should be tailored to fit the needs of your particular community.

Much like the newspaper reporter, we have to answer questions concerning the who, what, when, where and whys of our home inspection program.

Let's look at each of these big "W's."

Who — The home inspection will be accomplished by firemen who have been trained to find fire hazards in homes.

What — A program designed to make your community a safer place in which to live. It is *voluntary* on the part of the occupant.

When — When will the program begin? During what hours of the day will the inspection be conducted?

Where — What areas of your community are you going to inspect first? Larger communities have found it practical to divide into areas and send out letters or advance notification as to what day and approximately what hour firemen will arrive.

Why — To reduce the loss of life and property.

Here of course is a major difference between volunteer and paid departments. Volunteers who cannot inspect during the day will be required to use evening hours or weekends. Care should be taken not to inspect too late in the evening or on Sundays since these are periods when the occupant wants to relax and be with his family. This is a particular problem which will have to be decided in each community. Chief Matt Jiminez of Hayward, California, reports very poor success using evening hours; other departments have found that early evening hours are very successful.

Two points should be re-emphasized. First, these five questions must be answered to fit your particular community and fire department. Secondly, it is equally important that this information be available to fire department members and to the homeowner.

Several methods are available to get the message out to the public. Radio, newspapers, television, local civic groups, and church bulletins have all proved of value. Posters located in store windows and letters or handbills distributed directly to the home will also explain your program.

Training volunteers can be accomplished at regular department meetings or during company drills. Not only should this training include the five "W's," it should also include teaching the men how to locate and recognize fire hazards in the home. Firemen may expect many varied installations in the home and it is important that they understand what is and what is not a hazard.

Volunteer departments have a particular advantage in this phase because of the diversified background of the membership. When training your firemen take advantage of personnel who have technical experience as electricians, heating mechanics, or other skilled trades. The use of slides or other visual aids can be very beneficial.

The important point is that volunteer departments *can* and *are* making home inspections. In addition to reducing the fire hazards in the home, there are many fringe benefits to be considered — increased good will and public relations, increased familiarity with your community including construction of homes, streets, location of water supplies, and other things your fire department needs to know.

Using Long Lines of Small Hose

by Warren Y. Kimball, Managing Editor

ONE of our rural fire department members has asked that we discuss the use of long lines of small diameter hose. City fire fighters may not realize that a great many rural fire trucks are equipped chiefly with 1½-inch hose and booster hose. In many small departments only one pumper intended for use in the town or village carries 2½-inch hose, but the apparatus designed for fighting farm fires uses smaller hose.

There is no reason why streams cannot be supplied through long lines of 1½-inch hose if an appropriate size of nozzle is used. For example, a stream from a ¼-inch tip discharging at 50 pounds nozzle pressure will only involve about 5 pounds loss per 1,000 feet of good grade rubber-lined 1½-inch hose. If the hose has a rough lining, the loss will be slightly higher. Of course, the ¼-inch tip only discharges 13 gallons per minute.

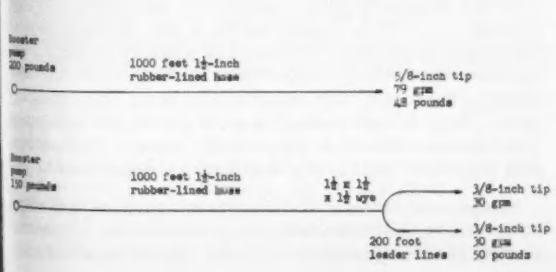
If in place of the ¼-inch tip we use a ⅜-inch tip, with 50 pounds nozzle pressure the flow will be 30 gpm and the loss will be about 25 pounds in 1,000 feet of good rubber-lined hose on approximately level ground. This layout would require a booster or portable pump capable of delivering 30 gpm at 75 pounds. However, a fair stream would be obtained at even lower pressure.

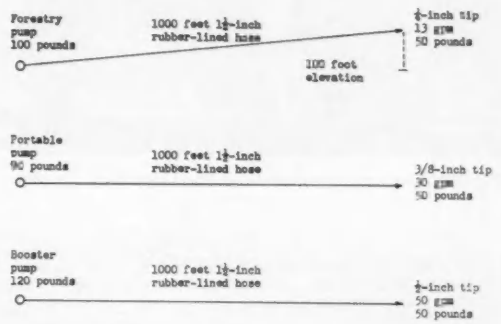
If the line is being supplied by a booster pump capable of discharging 50 gpm at 120 pounds, a ½-inch tip can be used at the end of a 1,000-foot 1½-inch line unless there is a major elevation.

If the pump will deliver 80 gpm at 150 pounds, it will be possible to supply a ⅝-inch tip at the end of 1,000 feet of good 1½-inch hose.

Obviously, if the line is less than 1,000 feet long, the nozzle pressure and flow would be increased with a given pump pressure. If the line is longer than 1,000 feet, the nozzle pressure and flow would be less unless pump pressure was increased. When the nozzle is elevated 50 feet above the pump, 21 pounds additional pressure will be required or the nozzle pressure and flow will drop. If the hose has a rough lining, the results will be nowhere near as good, but it still should be possible to get a working stream of water.

When supplying a ¼-inch tip through 1½-inch hose on level ground, the pressure loss will not equal nozzle pressure in a mile or more of hose. For example, if a pump was discharging at 100 pounds, you still have better than 50 pounds at a ¼-inch tip a mile away. (However, it will take some time to charge a line that long.)


Booster pump 200 pounds
1000 feet 1¾-inch rubber-lined hose
5/8-inch tip 79 gpm 48 pounds
Booster pump 150 pounds
1000 feet 1¾-inch rubber-lined hose
1¾ x 1¾ x 1¾ wye
3/8-inch tip 30 gpm
3/8-inch tip 30 gpm 50 pounds
200 foot leader lines


Forestry pump 100 pounds
1000 feet 1¾-inch rubber-lined hose
¼-inch tip 13 gpm 50 pounds
100 foot elevation
Portable pump 90 pounds
1000 feet 1¾-inch rubber-lined hose
3/8-inch tip 30 gpm 50 pounds
Booster pump 120 pounds
1000 feet 1¾-inch rubber-lined hose
½-inch tip 50 gpm 50 pounds

With a ⅜-inch tip on 1½-inch hose, pressure loss will equal nozzle pressure in about 2,000 feet of hose. Thus, 100 pounds at the pump would give about 50 pounds nozzle pressure at 2,000 feet or 67 pounds at 1,000 feet. Of course, there would be some difference due to elevation or roughness of hose lining.

With the ½-inch tip, loss will balance nozzle pressure in about 700 feet of 1½-inch hose. With a 1,000 foot line on level ground, about 40 per cent of the pump pressure will reach the nozzle.

With a ⅝-inch tip you could begin to get into trouble with long lines of 1½-inch hose because loss equals nozzle pressure in about 300 feet. With a pump discharging at 100 pounds you would get about 30 pounds at a ⅝-inch tip on a 600-foot line.

Fog nozzles can also be supplied by long 1½-inch lines. For example, with a fog nozzle discharging 50 gpm at 100 pounds, pressure loss equals nozzle pressure in 1,400 feet. If you wanted 100 pounds nozzle pressure with a 1,000-foot line, 200 pounds would be needed by the pump. If the pump was discharging at 150 pounds, you would have 75 pounds at the nozzle and a flow of 43 gpm.

Assume a 50 gpm fog nozzle on a 1½-inch line 1,000 feet long is supplied by a pump discharging at 170 pounds. Nozzle pressure would be about 100 pounds.

So, don't tell anyone that streams cannot be supplied by long lines of 1½-inch hose. It's up to you to use the correct nozzle tip size to make use of the available pump capacity and pressure. If the pump is a small capacity, high pressure forestry pump, you will be limited to a small nozzle tip. If it is a portable pump capable of 50 gpm at 90 pounds, use a ⅜-inch tip on long 1½-inch lines over level ground. If it is a booster pump capable of 50 gpm at 120 pounds, you can supply a ½-inch tip. If it is a pump capable of 80 gpm at 200 pounds, a ⅝-inch tip could be supplied.

If your pump will give 60 gpm at 150 pounds, you can supply two ⅜-inch tips on 200-foot lines wyed from the end of 1,000 feet of 1½-inch rubber-lined hose.

When using a 500-foot line of smooth rubber-lined hose, the percentage of pump pressure reaching the nozzle will be about as follows: ¼-inch tip — 98 per cent; ⅜-inch tip — 80 per cent; ½-inch tip — 58 per cent; ⅝-inch tip — 37.5 per cent.

Fire station and apparatus of the Coos Bay, Oregon, Fire Department. Chief Roble is beside the chief's sedan at left.

How a Small Fire Department Gets Things Done!

THE city of Coos Bay, Oregon, population slightly more than 7,000, is on the southwest coast of Oregon about six miles inland and 140 miles north of the California state line. It features a landlocked harbor with a bay area of about 15 square miles and is one of the world's largest lumber shipping points, although agriculture and commercial fishing play a major role in the economy.

The fire department protecting this area is commanded by Chief William P. Roble, former chief of Salem, Oregon, and a man with more than 30 years of fire service experience. Under Chief Roble paid personnel include Assistant Chief R. S. Wheeler, Captain R. H. Anderson, drill master, and Pump Operators K. Wellsandt, H. Barnett, E. Ellis and J. Alexander. In addition, however, the department is supplemented by an auxiliary of 30 volunteer fire fighters headed by Deputy Chief P. Matson.

Back in 1957 the Coos Bay City Council approved an ordinance which permitted formation of the "Auxiliary Firemen's Association." This very active group holds drill sessions each Thursday evening with the paid members, with training lasting from 1½ to 2 hours.

Apparatus manned by the department, shown in the photo above, includes a Chevrolet chief's car, a Ford pickup truck, a 750 gpm FWD pumper, a 1,000 gpm American LaFrance pumper, an 85-foot American LaFrance aerial ladder, a 750 gpm Mack pumper, and a Ford truck mounted with a 500 gpm pump and used principally for salvage operations. All of this apparatus is housed in the headquarters station.

Last year's annual report of the Coos Bay Fire Department presents a striking example of what a small fire department can accomplish under the direction of a professional chief. It should be particularly enlightening for those individuals who somehow have concluded that much of the fire fighters' time "in quarters" is spent in idle recreation.

Last year in Coos Bay the fire department response to alarms and the fire losses were not particularly unusual. Altogether the department received a total of 154 alarms, 21 of these for action outside of city limits. Building and contents fire loss amounted to little more than $81,000 out of a potential $3,000,000 value "at risk." It is interesting to note that volunteer response to general alarms averaged over 22 men per alarm, and the response to still alarms averaged more than 4 men per alarm. One of the alarms for outside of the city limits was for a mutual aid call; the other 20 alarms were for "contract" property in the surrounding area.

What was particularly significant last year was the schedule of those fundamental fire department activities which, although remote from the glamor of actual fire fighting, are vitally important to the efficiency and steady progress of the municipality's service organization. Here, for example, are some of the miscellaneous improvements listed in the annual report. Remember, this is a *small* paid and volunteer fire department.

Redecorated interior of fire station; repainted fire alarm street boxes and standards, fire hydrants and apparatus; started pre-fire planning and scale charts for water-front

Captain R. H. Anderson, drill master, devised this public information bulletin board, which stands in front of the station. Statistics on fires are changed with each alarm.

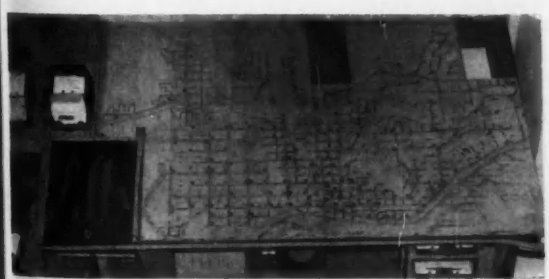
buildings, mercantile and publicly occupied properties; held monthly written examinations for personnel on fire department drill manual; kept continual inventory of all apparatus and equipment; built fire resistant enclosure of emergency electric plant and the air compressor room; removed all oil, grease and lubricating equipment from the fire station to the city maintenance shops; conducted annual tests of all 1½-, 2½- and 3-inch hose, marking all hose with a new number label system; held fire protection conferences with water-front property owners and managers.

In addition, Chief Roble and other members of the department attended at least six different fire service organization meetings, the League of Oregon Cities Annual Conference, and hosted meetings of the Southwestern Oregon Fire Chiefs' Association.

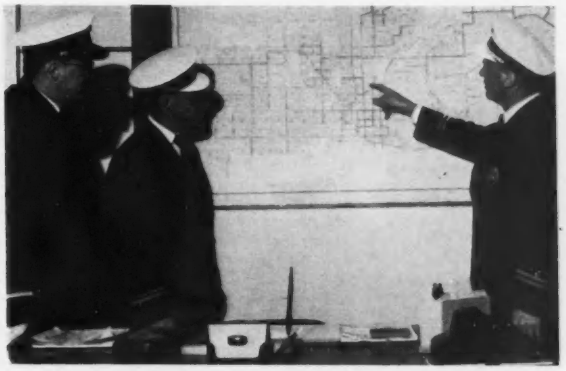
The department purchased a number of new items of apparatus and equipment last year, but the members also built or improved equipment which would be helpful to the department's operations. Sample items:

All apparatus was equipped with positive disconnect switches to eliminate storage battery drainage. An alarm box, register and take-up reel were installed on a visual education board for information of public groups visiting the fire station. Also completed was the electric personnel assignment roster and equipment panel (see photo). A hydrant location map board was revised and rebuilt, an activity bulletin signboard was constructed for the front of the station, a "fire triangle" was made for public education, a new alarm box location board was built for the dispatcher, a public address system was installed throughout quarters of the fire station, the service counter in the main office was remodeled and encased in glass, an area map of the water distribution was constructed with the "main" sizes noted and a large aerial photo of the city was also installed to show water availability and exposures. All apparatus radio-equipped was converted for future split channel operation, a complete library of the NFPA Fire Codes and NBFU bulletins, City and State codes and regulations was obtained, and new forms for evaluating efficiency for entrance and promotional examination procedure were adopted by the department. In addition, a new fire prevention code was adopted by the City Council. Five new hydrants were installed, one was relocated, two were replaced and standard threads were placed on two hydrant steamer connections.

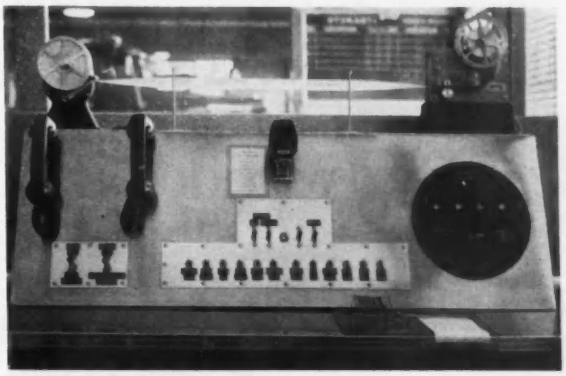
It is obvious that Chief Roble's fire department spent a busy year, but the "in quarters" work of this small group certainly represents a significant return on the funds the city invested in fire protection.



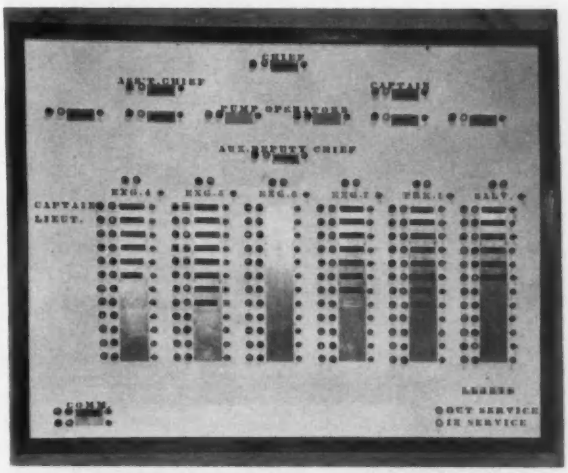
Department members also built this alarm box and hydrant spot map from donated parts of confiscated pinball machines. Alarm operator consults Rolodex Card System and activates electric map by inserting a plug in the numbered opening designated by the card system. Colored lights indicate location of alarm box and hydrants which responding volunteers can check quickly. Streets for response to the alarm are marked with green arrows.



Captain Anderson, Assistant Chief R. S. Wheeler, fire marshal, and Chief Roble discuss pre-fire planning on certain target hazards.



This alarm dispatcher console was built by department members. It features two-cradle type telephone hand sets activated by double-contact toggle switches, Gamewell alarm equipment and radio microphone. Switches for "Plectron" units, microphone, automatic doors, alarm resets, station tapouts, horn manual operation and exterior floodlights were standardized and mounted on brass plating with embossed labels.



This electrical apparatus and personnel assignment board was also built by members. Red lights indicate member or apparatus in service; green shows out of service. Brass plates with black and white embossed lettering clearly detail men assigned to equipment and responsibilities.

This hand tub was purchased by Redwood City almost one hundred years ago.

100TH ANNIVERSARY *of the*

Redwood City Fire Department

Chief Joseph L. Lodi joined the Redwood City Fire Department as a volunteer in 1930. He was appointed chief in 1946.

Headquarters Station, erected in 1920, houses a squad unit, 75-foot Maxim aerial ladder truck and a 1,250 gpm Seagrave pumper. Drill area complete with training tower and drafting pit is in rear.

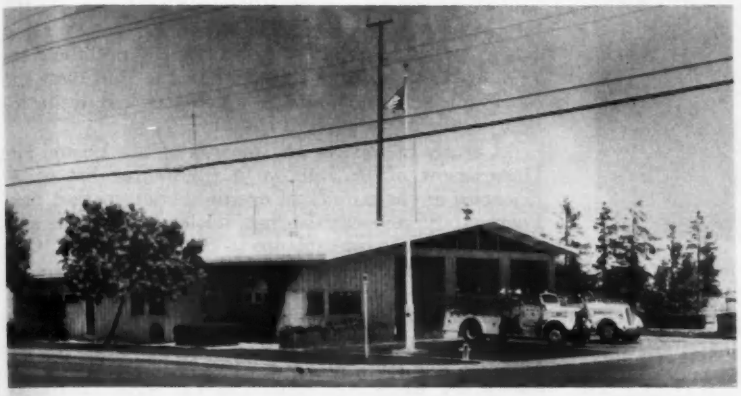
IN SEPTEMBER just past, the fire department in Redwood City, San Mateo County, California, celebrated its 100th anniversary. The department, commanded by Chief J. L. Lodi, held a special celebration throughout the week beginning Monday, September 19. We are indebted to Captain Alfred Hund and Captain C. M. Bubniak who provided information on the department's history and current activity.

It was in September of 1861 that citizens of Redwood City first met to organize a fire company. After a couple of meetings a constitution and by-laws were adopted and the organization became known as Redwood City Fire Company No. 1. Twenty-three members were enrolled, including a foreman, first and second assistant foremen, a secretary and treasurer. The by-laws mentioned that the company membership was to be not less than 20 members nor more than 65 members. Initiation fee was $1 and monthly dues were twenty-five cents.

Six months later a Fire Engine Committee was given permission to order a hand pumper from Cowing and Company of Seneca Falls, New York. This arrived on September 22, 1862, and total purchase cost was $616.70. A couple of months later the first fire station was completed on Main Street and a fire bell was purchased. It was not until about two years later that the first major fire occurred in the city. A large hotel was destroyed, but another hotel building closely exposed was saved by the volunteers.

As the town grew, fires became more frequent, and in 1889 the fire company asked the town trustees to take over the fire company. This was the beginning of today's Redwood City Fire Department. A hook and ladder and cart were purchased and three fire companies were formed in different parts of the town. The first hand-drawn chemical engine was purchased at the turn of the century, and the first electric fire alarm system was installed in 1912.

Station No. 2, Redwood City Fire Department. Erected in 1928, the building houses a 1,000 gpm triple-combination Van-Pelt pumper and a City Service Truck.



Station No. 3 was erected in 1953. It houses a 500 gpm triple-combination Van-Pelt pumper and a 1,000 gpm triple-combination Seagrave pumper. Pumpers also carry 500-gallon tanks.

Redwood City's first motorized fire engine was ordered and delivered in 1915 and was a chemical engine with a hose body built by the Schnerr Company. In 1921 the first motorized pumping engine — a Seagrave 750 gpm pumper — was purchased. In the same decade another 1,000 gpm Seagrave pumper and an American LaFrance ladder truck were also bought.

The first paid chief of the department was Chief Mark E. Ryan, who was given that office in 1931 after serving since 1915 as a volunteer fire chief. In July 1946, Ryan retired and was succeeded by the present chief, J. L. Lodi.

At present, Redwood City has fifty full-time firemen, including Chief Lodi, an assistant chief, two battalion chiefs, a fire marshal, a fire alarm technician and nine captains. Apparatus includes four pumpers, a squad unit, a 75-foot aerial ladder truck, a high pressure pumper and a rescue unit. The department anticipates receiving a new 1,000 gpm pumper this fall and is developing specifications for an aerial platform truck. Its protected area covers approximately 39 square miles. The department has a fire prevention office manned by the fire marshal and an inspector.

One unique piece of equipment used at the training tower is the "Hart Water Saver." This is a device which is fitted into one of the window openings so that water drafted from the pump test pit can be used to direct ladder streams or hand streams into the tower. Then the water is recirculated back to the pit. The department reports that this not only saves water but also has minimized damage to the training structure. Captain William F. Hart of the department designed and developed the "Water Saver."

Ladder pipe stream is directed into Hart Water Saver in training tower.

The great Boston fire as sketched for *The Illustrated Police News* of November 9, 1872. This scene shows Washington Street, looking from the corner of School Street. The Old South Church, at left, was protected by a hand pumper from Brookline when hydrant pressure was inadequate for steamers. Large building in right center housed the renowned *Boston Transcript*.

The Great Boston FIRE Of 1872

OFTEN we fail to realize the progress that has been made in community fire protection. As a result of good practices learned through bitter experience, the average city or town is much better protected against fire than was the case in the last century. Accordingly, persons only interested in immediate municipal costs argue that big fires are rare and may sometimes question the wisdom of expenditures needed to maintain standard fire department manning and equipment. It may be that because fire departments have become so successful in keeping down losses that another round of big conflagrations will be necessary to teach this generation that it does not pay to gamble with weak or inadequate fire protection.

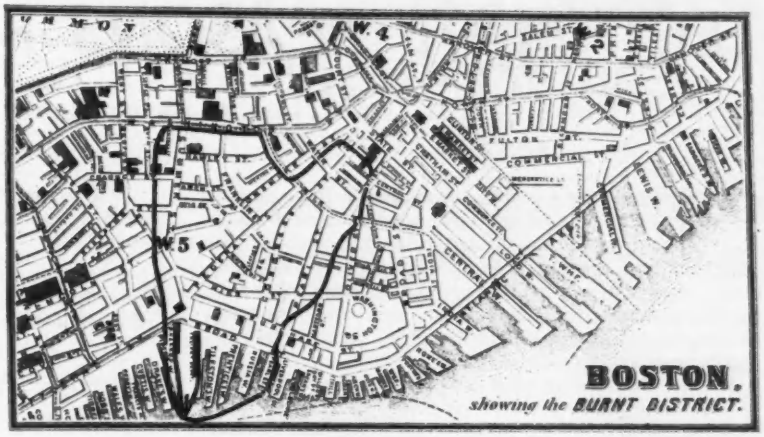
Most persons know that Chicago was destroyed by a conflagration on October 9, 1871, just 90 years ago. Fire Prevention Week annually marks the anniversary of this date. The following year in November, approximately a square mile of the business district of Boston was wiped out by a conflagration. These were the two largest city conflagrations in American history subsequent to the adoption of steam fire engines about the time of the Civil War and prior to the Baltimore and San Francisco conflagrations which occurred during the first decade of the present century.

A study of reports and records of the Boston Fire Department of 1872 shows a frightening list of deficiencies in the municipal fire protection of that time. Fortunately, the city learned its lesson and the situation bears little resemblance to Boston of today. Contrasted with the present 2,000 full-time employees the 1872 Boston Fire Department had 472 members of which only 89 were permanent men. The others were paid only for duty at fires. Chief Engineer John S. Damrell was paid $3,000 a year and was elected annually by the City Council along with 11 district engineers who were call men. The engineers, stokers, and drivers of steamers were permanent, as were the drivers of ladder trucks. All firemen were call men, most of whom were paid $300 a year.

The fire department consisted of 21 engine, 10 hose and 7 ladder companies, but only 6 engines, 5 hose, and 2 ladder companies were located in the city proper. Fire companies elected their own officers annually. Most of the downtown steamers were rated at 500 gpm "when working at a fair speed," but several steamers in outlying areas were as small as 250 or 300 gpm. Steamers were each normally pulled by two horses, but at the time of the fire most of the horses were sick and apparatus had to be drawn by hand. Very few engine companies had separate hose carriages. A two-wheel reel with 300 to 500 feet of 2½-inch leather hose was towed by the steamer. Of course, this added weight slowed the response. Steam was not maintained in the engine boilers, as was a later practice, and quick-hitch harnesses had not been devised. This probably did not matter, as fire fighting depended on call men who responded from other jobs when the tower bells rang.

Each hose company carried from 500 to 1,000 feet of "leading hose" on a one-horse carriage.

Chief Damrell had complained to the Water Board for several years, without success, of the inadequacy of the water supplies. These were furnished chiefly by 4-inch mains. Hydrants were supplied by 3-inch branch pipes. The Water Board did not share the Chief's concern. Fortunately a number of cisterns (also fed by 4-inch mains) were maintained from which engines could take suction. Chief Damrell testified that it was impossible to concentrate streams at any one location, because one engine would take all the water from any main.



The History of the Great Fire in Boston, by Colonel R. H. Conwell, showed this sketch. Bold line surrounds burned area in which 13 persons were killed and 776 buildings were destroyed. Property loss was 75 million dollars.

Numerous witnesses testified that during the conflagration streams of water did not go above the third floor level, although 5- and 6-story buildings were common in the fire area. There were few building regulations, and fire-resistive construction was unknown. Instead, wooden trim and dormer windows were common on the upper floors. Exposure protection was almost unknown, and fire crossed the narrow streets above the heads of the firemen. Automatic sprinklers had not been invented.

There were no water towers or ladder pipes or other means of getting streams to upper floors. Aerial ladders and water towers had not been invented. Buildings did not have fire standpipes. The longest fire ladder was 40 feet. Modern extension ladders had not been invented. Short ladders could be spliced to reach 62 feet, but it took a dozen men using poles to raise the spliced ladder. There were no heavy stream devices.

Help came from a total of 30 outside fire departments from as far away as New Haven, Connecticut; Portsmouth, New Hampshire; Biddeford, Maine; and Providence, Rhode Island. Help included 1,689 fire fighters with 45 engines, 52 hose carriages with 41,050 feet of hose, and 3 ladder trucks. Hose threads would not connect to Boston hydrants, so outside engines drafted from fire cisterns.

Also, in those days communications left much to be desired. The telephone had not been invented. They did have telegraph which was used to call outside help. Within the department, alarms were given over the fire alarm telegraph. There were street boxes, but these were kept locked with keys in the custody of reliable citizens. The locks had to be changed from time to time to prevent false alarms. The fire alarm system was not under the control of the fire department. There was no automatic fire detection equipment in buildings. The fire was visible several miles away before the first alarm was sounded. Not only was the building of origin fully involved but three major exposures were well alight when the chief arrived within 10 minutes of the first alarm.

There was no organized fire prevention program within the fire department and no personnel assigned to enforce the meager fire prevention regulations.

As a result of hearings held after the fire, the department was reorganized and placed under a Board of Fire Commissioners. Within a relatively short time a great many improvements were made. All companies in high value areas were manned with full-time permanent fire fighters. A number of new companies including a fireboat company were placed in service. The fire alarm system was transferred to the fire department. A training program was started. A fire department maintenance shop was provided. District chiefs were made permanent and given responsibility to familiarize themselves with buildings in their districts for pre-fire planning. Fire prevention and building regulations were improved. Improvements were also made in the water distribution system and additional hydrants were installed on larger pipes.

Perhaps it is not out of line to predict even at this time that many growing cities that have not built up their fire defenses to keep pace with the increase in persons and property may likewise learn the hard way that skimping on fire protection can be a costly gamble. In general, older cities of a given population have more adequate fire protection than many of the newer cities. They have learned by experience. In some cases their municipal officials have suffered the wrath of a disillusioned public who assumed that they had adequate protection until they learned the hard way that they had too little to be safe.

The best possible protection that a community can afford often provides a scant margin of safety when conditions are right for a big fire. History has proven that good water supplies and well-manned and equipped fire departments to use them are a necessary effective shield for our combustible cities.

The Illustrated Police News **also showed this action. Since the fire department's horses were sick the steamers had to be pulled by hand. Hose cart at right otherwise would have been attached to rear of steamer.**

LEGITIMATE REASONS FOR ABSENCE

by Warren Y. Kimball, Managing Editor

ONE reason why many fire departments have trouble in properly manning their apparatus is because their manpower tables do not take into account the fact that men are absent from duty for numerous reasons. Experience in many departments has shown that merely assigning to each shift the number of men who should be riding the apparatus does not provide effective manning.

If a fire department does not provide some "cushion" in its manpower structure to make up unscheduled absences, it will be chronically undermanned. Below are just a few of the reasons why men are absent from their duty platoons. No doubt our readers will think of many more. Our reason for printing these is to stress the need for providing sufficient fire fighters on each working shift to allow for the inevitable absences so that an effective level of service may be maintained. If this is not done the actual on-duty strength will be reduced by at least 10 per cent.

For example, if a department had 120 members assigned to three platoons of 40 men each, there would be an average of 12 men absent the year around. Thus, each platoon would have an effective strength averaging 36 men. Actually, to maintain 40 men on duty, each platoon should have at least 45 men. An average absence of 10 per cent would be 4.5 men, leaving an average on-duty strength of 40.5 men.

Here are some of the reasons that men do not respond with their companies:

". . . Jones is on vacation, Kelly's off sick, Smith's off on holiday time, Tapp's off injured, Paulk's off on military leave and THAT is why you've got the watch again tonight."

DISCIPLINARY ABSENCES: Such as members suspended for infraction of rules and regulations and men AWOL.

FAMILY PROBLEMS: Sickness or funerals in member's immediate family. Absence due to sickness or injury of member not in line of duty.

FIRE PREVENTION: Including inspection work in company district; detail of members to fire prevention bureau work; details to schools, scouts, civic meetings; details to public functions where fire fighters are required to be present; theatre details; arson or false alarm patrols or stake-outs.

INJURED LEAVE: Men absent due to injuries in line of duty. (This may involve holding jobs open for some months.) Men may also have been returned to "light house duty" which limits them to station duties.

MILITARY LEAVE: Men away in military service may have rights to reinstatement which prevent filling their jobs. Members of armed forces active reserve units must be given time for drill and encampment.

MAINTENANCE WORK: Certain maintenance work may require members to be out of quarters, such as hydrant inspection, lubrication and testing; salting and shoveling hydrants; and fire alarm box inspections in district. Company members may be detailed to certain apparatus repair and maintenance work.

SPECIAL DETAILS: Many are the details of company men to temporary operations or operations which may not require full company manning. For example, a watch detail may be left at the scene of a fire or an accident. Stand-by details may be needed for pumping jobs, dump fires or salvage work. There may be details to apparatus that is not manned regularly but responds on special call, or men may be detailed to operate reserve equipment. Members are frequently detailed from companies to serve as chiefs' aides, are assigned to watch duty at headquarters stations, or detailed to man ambulances or inhalator squads, to the shops, drill school, etc.

ORGANIZATION WORK: There are many organizations related to the fire service. Quite often meetings call for attendance of men on the duty platoon. Examples are: fire officers' meetings, fire fighters' union executive meetings or relief association and credit union executive committee meetings, conventions and conferences.

PERSONNEL TURNOVER AND ABSENCES: Men may take leaves of absence for personal reasons with the right to return to active duty. The leave may extend up to six months with one or more extensions possible. Often, probationary men are assigned to a fire company on a part-time basis while being trained.

PUBLIC RELATIONS: A modern fire department has many jobs to do that require men's time and which come under the above heading. Often jobs get assigned to the fire department because there is no other organization to which the mayor or city manager can turn to get the job done. Some of these tasks are chauffeuring of dignitaries; various special civic activities, including furnishing floodlights and public address equipment; hospital detail including blood donor programs; care of

public clocks, flagpoles, etc.; participation in parades; providing street showers for children; flooding skating rinks; guarding traffic crossings at public schools; rehearsals and performances of fire department drill team, fire department band, fire department glee club.

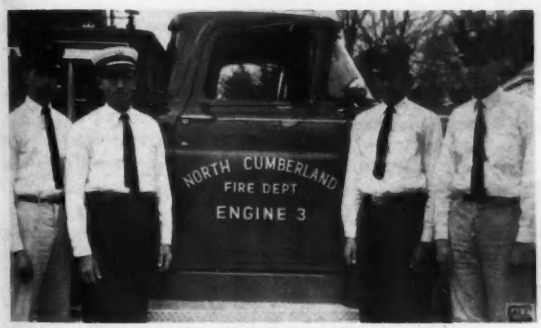
TIME OFF: Men may have time off or days off for various reasons including compensatory time off for holidays worked and for overtime worked. Time off may be ordered in lieu of pay when the budget is short. Men may be excused by their company officers to attend church or for various other reasons.

TRAINING: Aside from regular company training in many departments, members from various companies are detailed to attend special courses and lectures and are detailed classes at the drill school. This often involves 20 or 30 members.

VACATIONS: Members are entitled to vacations varying from two to six weeks depending upon the local vacation policy, rank and length of service. Where each member has four weeks of vacation this means that one man is absent out of each 13 members, year round. Where vacations are not scheduled year round the absence rate will be higher during the vacations period, but in some places this may be partially offset by higher incidence of sickness and injury in the Winter. A fire department which does not provide additional manning on each shift to cover absences due to vacation will be chronically undermanned.

Fall Conference in Kansas City

THE annual Fall Conference of the NFPA will be held in Kansas City, Missouri, October 30–November 1. This will be the first NFPA sponsored meeting in that city and a large new audience from the midwestern area is anticipated.



North Cumberland Firemen's Association

Last April marked the beginning of a new association formed by the North Cumberland Volunteer Fire Department in Rhode Island. The association, developed for the educational, social and athletic purposes of all North Cumberland firemen, meets once a month. Officers elected for the first one-year term are (left to right): Howard W. Cook, Jr., treasurer; John F. Carlin, president; Joseph C. Wollen, vice president; Kenneth L. Short, secretary. They are shown with North Cumberland's newest truck, a 1959 Ford 500 gpm pumper. The department also has another 500 gpm pumper and a forest fire unit, all equipped with two-way radio. Deputy Fire Chief Shelton C. Parker is fully paid; all other members are volunteers. For alarms, the department uses a telephone "Red Network" which rings in the fire station, the chief's home and in the homes of three officers. Chief Nathan W. Whipple, Jr., has served the department for 36 years. *(Photo by Woonsocket Call.)*

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Comments on Concrete Dividers

THE August issue of FIREMEN magazine asked for comments from fire departments which have experienced problems with the raised concrete type of street divider. So far, two interesting comments have been received from California.

Chief Matthew Jiminez, who commands the Hayward Fire Department, stresses that *planning* is vitally important when a municipality intends to make use of raised divider strips. Public works officials, city planners, traffic engineers and others should give primary concern to the necessary operations of the fire department and other emergency service units.

Points to consider: Will openings in the dividers conform with existing fire hydrant locations? If not, greater hydrant distribution may be necessary to minimize delay in hooking up. Otherwise, some hydrants may have to be relocated. In high value districts, particularly, strip openings must be located to minimize delay in response and apparatus placement. Chief Jiminez recommends that such openings should be about 400 feet apart and no more than 600 feet.

Industrial areas, in particular, he says, should not feature raised concrete dividers in the streets. Such installations would narrow the street width and double parking and the necessary movement of commercial trucks could obstruct the response of fire department vehicles.

From Los Angeles, Deputy Chief D. T. Hibbard sends a special booklet which the fire department prepared on "Raised Channelization," i.e., concrete divider strips. Major points stressed in the booklet are: The strips slow down emergency response to a "disabling degree" and make it almost impossible to operate at large and extensive fires. Also, when traffic stops at intersection lights a responding emergency vehicle is bottled up in the lane behind the traffic. This is especially significant when fire apparatus has to pass through 15 or 20 intersections to reach the site of the alarm.

Another point stressed is that pumping apparatus and hose wagons cannot cross the divider strips to take hydrants on either side of the street. In some instances this would mean that hose lines would have to be laid across both traffic lanes, unnecessarily stopping all traffic. Fire department manpower, badly needed for fire fighting, must be stationed to keep traffic from crossing and rupturing hose lines.

In addition, when a big fire occurs it is frequently necessary to move apparatus to a better strategic position. The raised divider strips in the streets would be a serious obstacle to such movement.

A key point stressed in the Los Angeles booklet is that all of these elements would add significantly to the delay in fire department response and operation. Painted lines on the street, the fire department maintains, would be almost as effective as the concrete barriers in regulating traffic safely.

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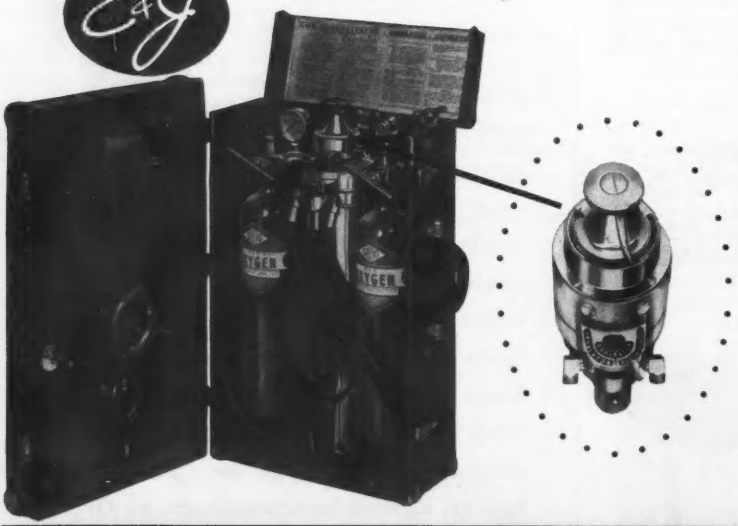

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Ohio Chemical & Surgical Equipment Co., Madison, Wis.; Ohio Chemical Pacific Co., Berkeley, Calif.; Ohio Chemical Canada Limited, Toronto, Canada; Airco Company International, New York City (Divisions or Subsidiaries of Air Reduction Company, Inc.)

"Our firemen get there in a hurry — they know all the shortcuts."

Excerpts from new NFPA Pamphlet No. 49M
Price: 75 cents

HAZARDOUS CHEMICALS DATA

ACETIC ACID (Glacial)

DESCRIPTION: A clear, colorless liquid with strong pungent odor of vinegar.

USUAL SHIPPING CONTAINERS: Glass and polyethylene carboys and polyethylene-lined drums.

FIRE AND EXPLOSION HAZARDS: Gives off flammable vapor above its flash point, 109° F. Dangerous in contact with chromic acid, sodium peroxide, nitric acid, or other oxidizing materials.

LIFE HAZARD: May produce severe acid burns to skin and eyes. Prolonged breathing of concentrated vapor may be harmful. Maximum acceptable concentration, 10 parts per million.

STORAGE: Protect against physical damage. Separate from oxidizing materials and avoid storage near combustible materials. Keep above its freezing point (62° F.) as this material expands upon solidification and may burst glass containers.

FIRE FIGHTING PHASES: On small fires, use water, dry chemical or carbon dioxide; on large fires use water spray or "alcohol" foam. Wear self-contained breathing apparatus.

REMARKS: See Fire Hazard Properties of Flammable Liquids, Gases and Volatile Solids (NFPA No. 325), and Chemical Safety Data Sheet SD-41 (Manufacturing Chemists' Association, Inc.).

ACETONE (Dimethyl Ketone)

DESCRIPTION: A clear, colorless flammable liquid with characteristic mint-like odor.

USUAL SHIPPING CONTAINERS: Cans, steel drums, tank cars.

FIRE AND EXPLOSION HAZARDS: Fire hazard is slightly less than gasoline, having 0° F. flash point, flammable limits 2.6% and 12.8%, and ignition temperature 1000° F. Vapors are heavier than air (vapor density 2).

LIFE HAZARD: Respiratory, eye, and skin irritant; excessive inhalation exhibits narcotic effect. Toxicity is of low order. Maximum acceptable concentration, 1,000 parts per million.

STORAGE: Protect containers against physical damage. Separate from oxidizing materials.

FIRE FIGHTING PHASES: Lighter than water, soluble in it in all proportions. On small fires, use water, dry chemical or carbon dioxide; on large fires, use water spray or "alcohol" foam. Protect use and storage areas with automatic sprinklers or total flooding carbon dioxide systems.

REMARKS: Only Class I, Group D electrical equipment permitted in atmospheres containing acetone vapors. See the Flammable Liquids Code (NFPA No. 30), National Electrical Code (NFPA No. 70), Static Electricity (NFPA No. 77M) and Fire-Hazard Properties of Flammable Liquids, Gases and Volatile Solids (NFPA No. 325).

"NOW! A COMMERCIAL LAUNDRY DRYER THAT QUALIFIES . . . SETS A NEW HIGH STANDARD FOR THE INDUSTRY!"

Tumblette® by Cook

MODELS M3750 AND T3750 GAS DRYERS

Here is a dryer that is listed, tested and certified by fully accredited testing associations and laboratories — to meet the highest standards and strictest regulations. Available in coin-metered and timer-controlled models, with stainless steel or high gloss enamel finishes; has many outstanding safety features, including safety door. For full details and illustrated brochure, write manufacturer.

Tested, Inspected and Listed by Underwriters Laboratories, Inc.

Tested and Certified by Canadian Gas Association

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These certifications and/or listings are for fuel burning as well as electrical authorization. U. L. (natural and manufactured gas), CGA (natural and LP gas), CSA (natural and LP gas.)

6148

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WASHERS • EXTRACTORS • DRYERS

Chief Engineer Bond in Mexico

NFPA Chief Engineer Horatio Bond with fire department officers at a reception following a talk by Mr. Bond at the Instituto Mexicana-Norteamericano de Relaciones Culturales. From left are: Fernando Carbajal, NFPA Member Thomas M. Nevin, Carlos Morales Briones, Headquarters Captain Felipe Zepeda Diaz, Mr. Bond, Captain Francisco Garza and Captain Joel Rojas.

NFPA Chief Engineer Horatio Bond and Mrs. Bond visited Mexico in August, as guests of the *Instituto Mexicana-Norteamericana de Relaciones Culturales.* NFPA member Thomas M. Nevin, a director and treasurer of the *Instituto* is a member of the committee which is arranging visits under the Avalon Foundation grants.

Mr. Nevin arranged for Mr. Bond to meet most of the NFPA members in Mexico as well as members of the board and committees of the *Asociacion Mexicana de Instituciones de Seguros.* He also visited industrial plants and Mexico City's public fire department (Cuerpo de Bomberos).

Mexico, a modern city of 5,000,000 population, has numerous features of fire protection interest. For various reasons, it has first made its fire control manageable in a way other North American cities have neglected. There are practically no wood buildings, no buildings with bearing walls and no conflagration possibility due to spread of fire from building to building. Buildings are almost uniformly framed with steel or reinforced concrete, have concrete walls, interior partitions and roofs. Another favorable feature is the altitude — 7,500 feet — at which ignition is less easy than sea level. This markedly reduces the fire frequency. These factors explain, in part, how the city can get by with a fire department of only 343 men in three fire stations and no public hydrants.

Private fire protection is provided in a small proportion of buildings. It generally consists of fire extinguishers and private inside and outside hydrants supplied by roof tanks plus private pumps supplied from cisterns. The better industrial plants are sprinklered with private water supplies.

Some serious fires have been experienced, a notable recent case being the destruction of an unsprinklered wholesale warehouse. Another case illustrating local fire protection problems was a large fire in bagasse (sugar cane) in a factory yard.

Water supply is the dominant fire protection problem in Mexico. Another is building exit and access. Fortunately, Mexico has had no dramatic example of the exit problem, but it was illustrated in the retail store fire in Bogotá, Colombia, in 1958, where 83 died, and in a factory fire in Madrid, Spain, in February of

Another New Champion to Imperial County Fire District* — Their Sixth DARLEY

*EL CENTRO, CALIF.

W. S. DARLEY & CO.

2000 ANSON DRIVE ESTABLISHED 1908 MELROSE PARK, ILLINOIS

this year, with loss of life of 24 persons. These deaths were due to the compartmentation of property by high walls, a factor which reduces conflagration possibilities but which at the same time introduces a life hazard when fire occurs in a space with only a single access and exit route.

Some of the advantages of the basically good fire resistance of buildings is lost in cases where acoustical or decorative ceiling and wall finish is used. Much of this is made of domestic fibres which are highly combustible. This feature, as well as the enclosure of stair shafts in numerous modern tall buildings, appears to be largely unregulated.

The fire department in Mexico City has modern apparatus and its facilities include a training school and maintenance shop. It also has a trained staff of inspectors. Commanding the department is Coronel Evodio Alarcón Garcia. Executive Officer is Capitan (Primero) Felipe Zepeda Diaz and Chief of the Inspection Bureau is Capitan Francisco Juarez Oñate.

Nozzle Pressures on the Fire Ground, FSD-2

32 pp. and cover, 8½ x 11 inches
$1.00 per copy with discounts for quantities

THIS booklet, prepared by the NFPA Fire Service Department, presents in concise graphic form the basic data on flows and pressure requirements for standard sizes of nozzle tips with which all fire fighters should be familiar. It is designed to acquaint beginners as well as rank-and-file fire fighters with the pressure and flow requirements for effective hose streams.

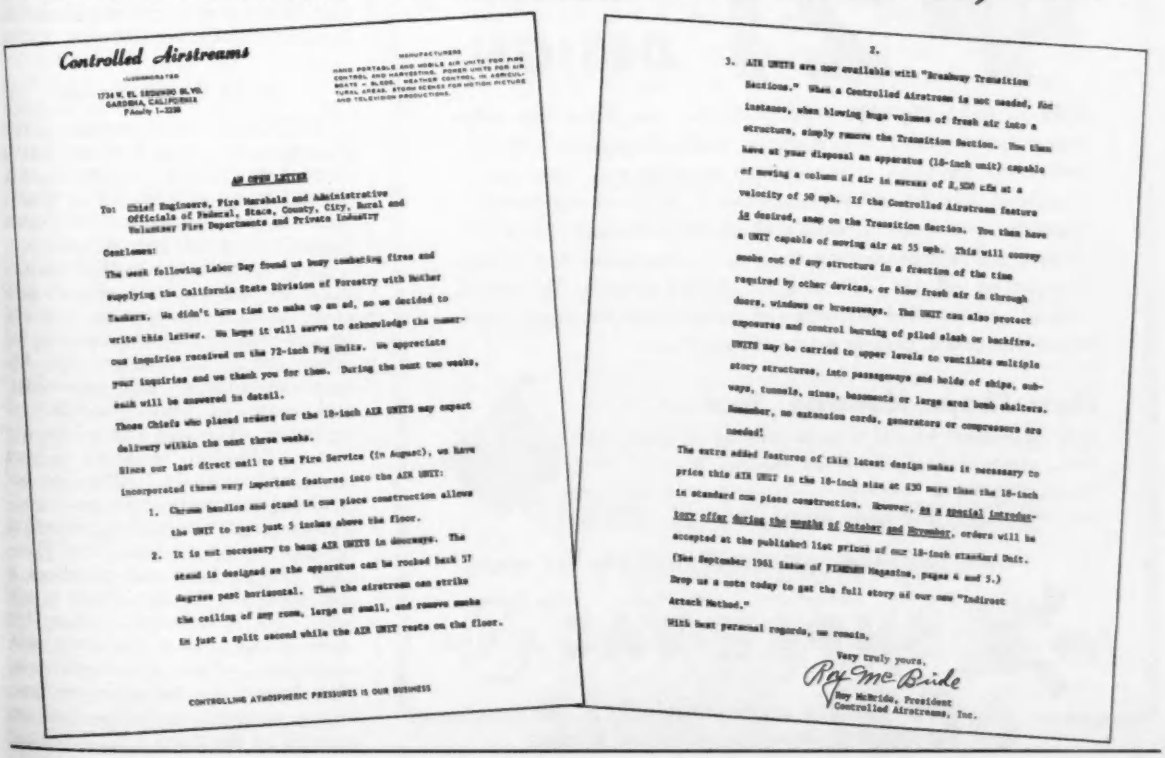
Fire stream data in this new text is based upon the principle long recognized by experienced fire fighters that regardless of length of line there is always some water and pressure at the nozzle. By knowing the flows of standard nozzle tip sizes and what is required to supply them, good streams may be provided.

"Nozzle Pressures on the Fire Ground," serves as an introduction to more detailed manuals available from NFPA including "Effective Streams for Fighting Fires," FSD–1, $2.00; and "Operating Fire Department Pumpers," $4.00.

New Rescue Truck in Ann Arbor

Chief Ernest Heller, who commands the Ann Arbor, Michigan, Fire Department, reports that this new rescue truck was recently placed in service. It responds to all building fires and emergency calls. The truck has automatic transmission, power brakes and steering, carries 100 gallons of water and has a high pressure pump supplying two hose reels. Manned by a four-man crew, it also has three stretchers, resuscitation equipment and the variety of other items shown in the picture.

AN OPEN LETTER FROM: *Controlled Airstreams, Inc.*



Controlled Airstreams

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MANUFACTURERS
HAND PORTABLE AND MOBILE AIR UNITS FOR FIRE CONTROL AND HARVESTING. POWER UNITS FOR AIR BOATS — BLOWS, WEATHER CONTROL IN AGRICULTURAL AREAS. STORM SCENES FOR MOTION PICTURE AND TELEVISION PRODUCTIONS.

AN OPEN LETTER

To: Chief Engineers, Fire Marshals and Administrative Officials of Federal, State, County, City, Rural and Volunteer Fire Departments and Private Industry

Gentlemen:

The week following Labor Day found us busy combating fires and supplying the California State Division of Forestry with Mother Tankers. We didn't have time to make up an ad, so we decided to write this letter. We hope it will serve to acknowledge the numerous inquiries received on the 72-inch Fog Units. We appreciate your inquiries and we thank you for them. During the next two weeks, each will be answered in detail.

Those Chiefs who placed orders for the 18-inch AIR UNITS may expect delivery within the next three weeks.

Since our last direct mail to the Fire Service (in August), we have incorporated these very important features into the AIR UNIT:

1. Chrome handles and stand is one piece construction allows the UNIT to rest just 5 inches above the floor.
2. It is not necessary to hang AIR UNITS in doorways. The stand is designed so the apparatus can be rocked back 57 degrees past horizontal. Then the airstream can strike the ceiling of any room, large or small, and remove smoke in just a split second while the AIR UNIT rests on the floor.

CONTROLLING ATMOSPHERIC PRESSURES IS OUR BUSINESS

2.

3. AIR UNITS are now available with "Breakway Transition Sections." When a Controlled Airstream is not needed, for instance, when blowing huge volumes of fresh air into a structure, simply remove the Transition Section. You then have at your disposal an apparatus (18-inch unit) capable of moving a column of air in excess of 2,500 cfm at a velocity of 50 mph. If the Controlled Airstream feature is desired, snap on the Transition Section. You then have a UNIT capable of moving air at 55 mph. This will convey smoke out of any structure in a fraction of the time required by other devices, or blow fresh air in through doors, windows or breezeways. The UNIT can also protect exposures and control burning of piled slash or backfire. UNITS may be carried to upper levels to ventilate multiple story structures, into passageways and holds of ships, subways, tunnels, mines, basements or large area bomb shelters. Remember, no extension cords, generators or compressors are needed!

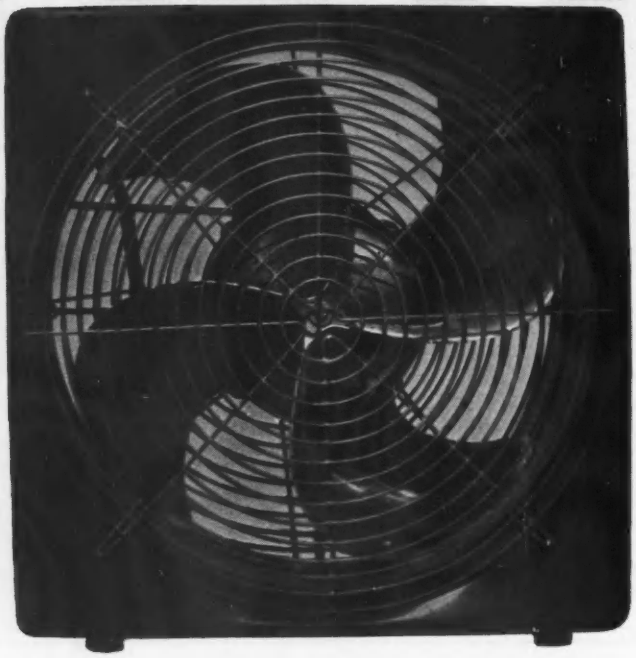
The extra added features of this latest design makes it necessary to price this AIR UNIT in the 18-inch size at $30 more than the 18-inch in standard one piece construction. However, as a special introductory offer during the months of October and November, orders will be accepted at the published list prices of our 18-inch standard Unit. (See September 1961 issue of FIREMEN Magazine, pages 4 and 5.)

Drop us a note today to get the full story of our new "Indirect Attack Method."

With best personal regards, we remain,

Very truly yours,
Roy McBride
Roy McBride, President
Controlled Airstreams, Inc.

NEW

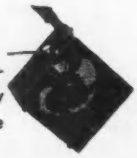


PLUS 21 4 BLADE DESIGN

HERE IS *REAL* PULLING POWER in the new Super Vac series Smoke Ejectors for fire and rescue work! Redesigned with four blades, the one-piece, cast aluminum propeller now increases the air volume over the entire blade area by 21% — a significant increase for emergency operations where seconds count. So fast, so efficient and so dependable is the "PLUS 21" propeller that it is now standard on all 12", 16" and 24" Smoke Ejectors. This means stepped up controlled ventilation of smoke-congested areas, faster rescue operations, greater safety margins.

New Shape Housing, Too!

New square-shape housing is rescue-designed for easier portability, greater strength, increased stability. It stands firmly on any of its 4 sides in emergency and carries easily (only one man) from any of its 4 corner handles.



Write for complete details now. Please note new address.

SUPER VAC

SUPER VACUUM MANUFACTURING CO., INC.
1055 East First Street • Loveland, Colorado

Pumper Wanted

THE Tri-Village Fire Department in West Topsham, Vermont, is a small volunteer fire department protecting 100 farms and residences in an area of about 15 square miles. At present, the department owns an old 500 gpm pumper which, according to Chief George S. Gibby, must be replaced.

The department is seeking a secondhand pumper that would be small enough to travel on narrow dirt roads, steep grades, and which would carry a water tank and booster line outlets. Chief Gibby is anxious to hear from any fire departments that have such apparatus available. His address is P.O. Box 96, West Topsham, Vermont.

Alaska Training

A SERIES of three-day training schools covering fire and arson investigation were held in Alaska last month. Deputy state fire marshals, municipal and state fire personnel, state police and U. S. Government personnel attended classes conducted by John Kennedy, Chief Special Agent of John A. Kennedy and Associates, Chicago, Illinois.

The training program was arranged by Alaska State Fire Marshal Robert F. Crouse, and Kennedy's textbook, *Fire and Arson Investigation*, were used as the standard text. The program included lectures, demonstrations, movies and slides.

Stress on Clean-up

IN ITS Fall Fire Prevention Campaign this year the Montclair, New Jersey, Fire Department, headed by Chief James P. Ferrara, has placed emphasis on "clean houses" to stress fire prevention.

Firemen making dwelling inspections are using a new slip to give their recommendations to property owners concerning the cleaning of cellar, garage, outside grounds, disposal of rubbish and trimmings, and more or better rubbish receptacles. The first line of the slip states, "You can be proud of your home and grounds." The idea behind the campaign is to get a positive emphasis to the fire prevention program. Deputy Fire Chief Theodore MacLachlan also mentions a statement on the slip which is left with the homeowner when his premises have been found in good condition. The statement says, "We have inspected your premises. We are proud to report that they are a credit to the town."

A Lot of Running!

"THE FIRE FIGHTER," published by the Firemen's Association, District of Columbia, Local 36 IAFF, recently presented some interesting statistics on runs and work performed by units of that department during the fiscal year ending June 30, 1961. In all, there were 93,688 emergency runs by fire department vehicles averaging 255 per day through the city streets. Perhaps publicity favorable to the fire service could be developed from such statistics.

In Washington, D. C., the 32 engine companies made a total of 24,842 responses during the 12 months or an average of 780 per company. As each engine company operates two pumpers, this was a total of 49,684 runs to alarms by engine company apparatus. Seven engine companies exceeded 1,000 responses each, with the busiest company making 1,304 responses or nearly three per day. Well over half of the engine companies exceeded 750 responses and only one engine company had less than 300.

At the scene of these alarms the engine companies went to work 6,923 times for an average of 216 working fire incidents per company. The busiest engine company did fire duty 404 times and more than half the companies had over 200 workers.

The DCFD operates 17 truck companies, which made 9,558 responses of which over half exceeded 500 runs a year and only four had less than a run per day. The busiest truck company did 950 runs. Four ladder companies exceeded a worker per day and more than half went to work more than 200 times a year.

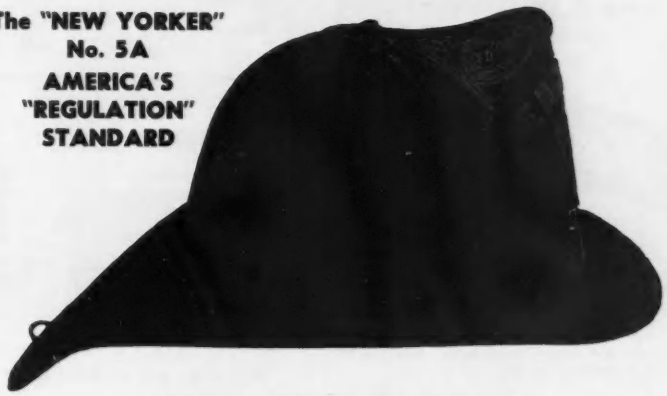
Two of the three rescue squads exceeded 1,000 runs. Five of the eight ambulances exceeded 3,000 runs with top honors at 4,312 runs out of a total of 23,661 calls for ambulances. The eight ambulances did 25 per cent of all the running of fire department vehicles.

The eight battalion chiefs had 7,805 runs with five exceeding 1,000 runs; the top figure being 1,295 or 3.5 runs per day.

Such statistics point to the importance of good maintenance to keep the apparatus in top operating condition. It also indicates the importance of driver training in municipal fire department operations. In Washington, D. C., apparatus drivers, including tillermen on ladder trucks, receive extra compensation. The safety of the public and fire department personnel is in their hands nearly 100,000 times a year.

CAIRNS LEATHER HELMETS

The "NEW YORKER" No. 5A AMERICA'S "REGULATION" STANDARD



THE FIREMAN'S FIRST LINE OF DEFENSE

The "original" of all leather helmets, the "NEW YORKER" was introduced by CAIRNS in the early 1800's and has steadily been improved in design and material throughout the years since. Its selected, specially-tanned, top-grain steer hide leather and its time-tested design make the "NEW YORKER" the safest, toughest, strongest, most durable helmet on the market — approved and accepted by the largest, most efficient fire departments in America.

The CAIRNS "LIFE-GUARD" LINE also includes other leather helmets, in other styles and weights — as well as helmets in aluminum and in FLINT-FLEX plastic — in regulation and drop-brim styles.

Write for Catalog 360 showing everything a fireman needs for his personal equipment — together with Department Record Books, Secretary's Books, and printed forms.

"THERE IS NO SUBSTITUTE FOR EXPERIENCE"

CAIRNS & BRO., INC. — Allwood, Clifton, N. J.

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FIRE HOSE DRYER

The patented, electrically operated Circul-Air hose dryer circulates pre-warmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. No other drying method is so fast — so economical — so easy to use.

ACCEPTED — APPROVED — RECOMMENDED

OVER 6,000 DEPARTMENTS CIRCUL-AIR THEIR HOSE

Porto-RAK HOSE STORAGE LOADING UNIT

The fast, modern way to handle, store and load hose.

Saves valuable space. Holds 1,800 ft. of 2½" hose — proportionately more of 1½" — in an 8 ft. space (when loading table is detached). Roll it right up to the truck for reloading — out of the way when not in use. Equipped with locking fiber-wheeled casters.

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Twenty-two (22) reprints (92 pages of text) of some of the best articles in FIREMEN magazine in recent years. Individual reprint prices range from 10 to 50 cents each. Order yours today!

Your price for the complete "REPRINT PACKET" . . . $3.00

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Lumber Yard Fires
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Firemen's Training in the Months Ahead

Alabama: An Arson Investigation Conference is scheduled for October 30–November 3. Write W. L. Rickard, P.O. Box 2847, University.

Arizona: The 9th Annual Arizona Fire Training School will be held at Phoenix College, Phoenix, October 19–21. Contact Assistant Chief Jake Siken, director, Phoenix Fire Department, 49 South First Street, Phoenix 4.

Arkansas: Two-week regional training schools will be conducted through November 30. For details write W. A. Turner, Education Building, State Capitol, Little Rock.

Florida: The University of Miami Fire Investigation and Subrogation Seminar will be held November 27–December 1 at the Carillon Hotel, Miami Beach. For details write Dr. Dan Steinhoff, Dean, Adult Education, University of Miami, Coral Gables.

Indiana: Purdue University will be the site for the 4th annual Fire Inspectors' Course, October 30–November 3. Contact Professor Shelby Gallien, Director, Public Safety Institute, Purdue University, Lafayette.

Kansas: The Kansas State Fire School will be held October 23–26. For details write Clyde A. Babb, Director, Kansas State Fire School, 111 Fraser, Lawrence.

New Jersey: An officers' training course will be conducted November 17–19 at Seaside Heights. For details, write the New Jersey State Safety Council, 24 Branford Place, Newark 2.

Oklahoma: The Seventh Annual Southwestern Arson Investigation Institute will be held at the Extension Study Center, North Campus, in Norman, October 17–21. For details write James Robinson, Coordinator and Legal Consultant, Southwest Center for Law Enforcement Education, The University of Oklahoma, Norman.

Ontario: The province of Ontario will conduct a Basic Fire Inspection Practices Course, October 16–20, and Mutual Fire Aid Forum — County Fire Co-ordinators, October 23–27. Contact D. E. Barrett, Director, Ontario Fire College, Box 830, Gravenhurst.

South Carolina: Itinerant training classes will be held each week through December. For details write H. B. Wells, Instructor, Shady Springs, Rt. 1, Prosperity.

Virginia: A Peacetime Radiation Fire Instructors School (for approved fire instructors only) will be held November 27–December 1 at Richmond. For details write R. Lawrence Oliver, State Department Education, Trade & Industrial Service, P.O. Box 654, Harrisonburg.

An Indian maiden, a Sioux
As tempting as fresh honey dioux,
Liked to show off her knees
As she strolled by tepees
And hear the braves holler, "Wioux Wioux."

ANON

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slimline fm
power package

FACT: The Slimline is the only 100-watt VHF Mobile Radio on the market. PURPOSE: Greater range from car to car—from car to base station . . . full saturation coverage of your entire area without dead spots. The Slimline power package (VHF or low band) is the only system that offers instant selection of normal output for short distance calls and full 100-watt output for long distance calls. ADVANTAGE—Keeps battery drain low. The stand-by power switch further reduces battery drain to less than that required for parking lights.

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IMPORTANT FEATURES: Transistor-powered / Heavy-gauge aluminum construction / Weight: Under-dash unit—8 lbs. 10 oz.; amplifier—13 lbs. 2 oz. / Precision hand-wired circuitry / Boost any 10-30 watt equipment to 100-watt output with amplifier alone. OPTIONAL: 2 or 3 channel operation / Unicall to guard against transmission from stations sharing the same frequency. PRICE: including all standard accessories: VHF—$595; low-band—$615; amplifier only—$250. For complete information, write today.

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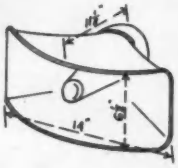
TRADE MARK
PROJECTOR

THE FIRST 100 WATT ELECTRONIC SIREN & P. A. SYSTEM DESIGNED FOR FIRE, POLICE, AND CIVIL DEFENSE VEHICLES

(1) **Model SFD-2** **100 Watt** . .
Up to four times more volume.

(2) **Model SFD-1** **50 Watt** . .
Outperforms competitive units by giving *full* watt-power as rated.



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Write for free Bulletin #27 on "Sireno" Electronic Siren-P.A. System

- **OCDM APPROVED**
  For matching funds.
- **COMPACT SIZE . . .**
  ½ as big as two-way radios.
- **FIVE (5) DIFFERENT SPEAKERS AVAILABLE**
- **PRODUCES FOUR VARIABLE TYPES OF SIGNAL**
  including distinctive "WARBLE."
- **COMPLETELY TRANSISTORIZED . . .**
  employs latest electronic components which reduces cost and increases reliability.

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SAFE-WARM-WATERPROOF

America's finest Firemen's boots are made by The Servus Rubber Co. They give you best protection and long wear. Ask your Distributor for Servus products, or write . . .

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Buy American Footwear — Made in America — by American Craftsmen

FIRE SERVICE MEETINGS

California:
OCTOBER 19: Redwood Empire Firemen's Association, quarterly meeting, Ukiah. Contact W. H. Lane, secretary, 74 Vendola Drive, San Rafael.
OCTOBER 20: Marin County Association of Fire Departments, monthly meeting, San Rafael. Write W. H. Lane at above address.

Delaware:
OCTOBER 18: Kent County Volunteer Firemen's Association, monthly meeting, Camden-Wyoming. Contact Paul B. Smith, secretary, Marydel.

Illinois:
OCTOBER 23–25: Illinois Firemen's Association, Inc., 71st Annual Convention, Pere Marquette Hotel, Peoria. Contact Roy W. Alsip, secretary, P. O. Box 8, Champaign.

Minnesota:
OCTOBER 24: The Southeast Minnesota Fire Department Association, Fall meeting, Lanesboro. Contact Everett Grinolds, secretary, Albert Lea Fire Department, Albert Lea.

Missouri:
OCTOBER 27: West Central Missouri Firemen's Association, Inc., monthly meeting, Savannah. Contact Harvey L. Dunn, president, Harrisonville.

Nebraska:
OCTOBER 20–22: Nebraska State Volunteer Firemen's Association, 79th Annual Convention, Hotel Madison, Norfolk. Contact Russell D. Salak, secretary, Box 312, Schuyler.

New Jersey:
OCTOBER 19: Gloucester County Firemen's Association, monthly meeting (Ladies' Night), Wenonah. Contact Walter H. Mattson, secretary, 29 Home Avenue, Gibbstown.

New York:
OCTOBER 19: Fire Chiefs' Council of Suffolk County, quarterly meeting, Smithtown Fire Headquarters. Contact Chief Harold Hochheiser, secretary, Riverhead.
OCTOBER 24: Suffolk County Volunteer Firemen's Association, regular meeting, Suffolk County Training Center, Yaphank. Contact Harold Hoek, secretary, 141 Division Street, West Sayville.
OCTOBER 29: Monroe County Volunteer Firemen's Association, Inc., regular meeting, 2:30 P.M. For location contact N. C. Morrell, secretary, 241 Buckman Road, Rochester 15.

Ohio:
OCTOBER 23: Western Hamilton County Fire Protective Association, regular meeting, Miamitownship Fire Department No. 3, Shady Lane Road. Contact Robert Oehler, president, 3626 White Oak Drive, Cincinnati 39.
OCTOBER 25: Central Western Firemen's Association, Inc., regular meeting, Covington. Contact Jerry Wagner, secretary, 1007 N. Barron Street, Eaton.
OCTOBER 26: Stark County Firemen's Association, regular meeting, Magnolia. Contact Gene Kay, secretary, 2036 29th Street, N.E., Canton 5.

Oregon:
OCTOBER 18: Central Willamette Fire Fighters' Association, regular meeting. For location, contact E. J. Bell, Stayton.

Fire Prevention Contest Entry Blanks

ENTRY blanks for the 1961 Fire Prevention Contest have been sent out to the 1,000 municipal and industrial entrants from the United States and Canada who participated in the contest last year.

Others interested in entering should write for blanks without delay. There is still ample time to prepare an entry, which must be submitted by the closing date of November 30.

The contest pays a threefold dividend to entrants: It provides an opportunity for international recognition of excellent fire prevention activities. It materially helps to arouse interest in this subject throughout the community, the plant, military installation or government facility. It is a definite stimulator of enthusiasm among the personnel of the fire department, fire brigade, or other organization sponsoring the contest entry.

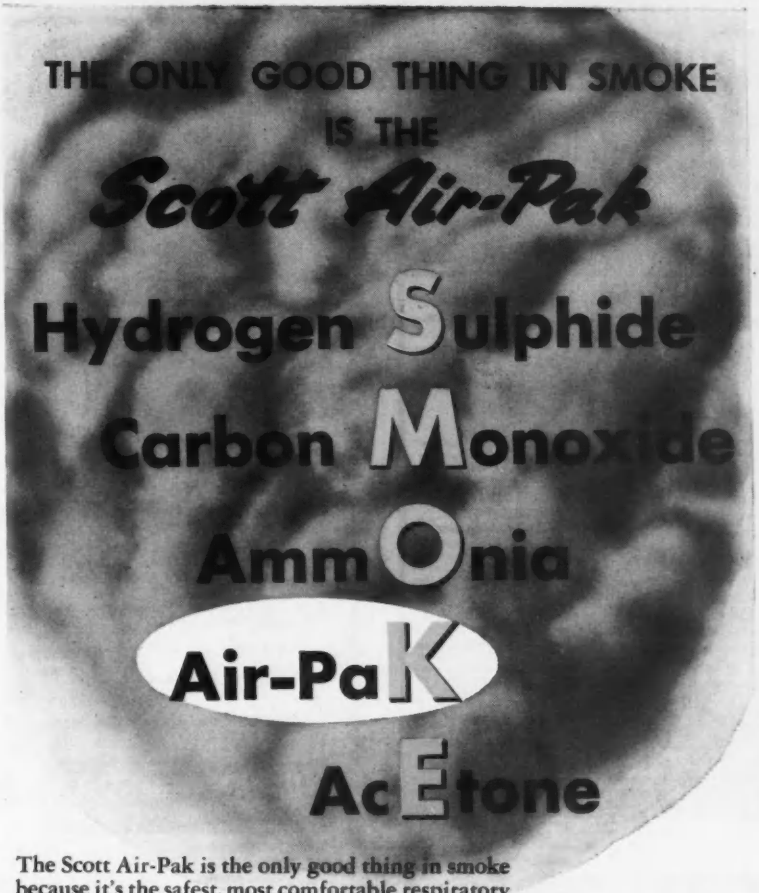
Please specify contest division (municipal, industrial, military, or government) when requesting forms. Address: Public Relations Department at NFPA headquarters.

IRFAA Meeting

THE 14th Annual Convention of the International Rescue and First Aid Association will be held at the Hotel Roanoke, Roanoke, Virginia, November 2–4. The Roanoke Life Saving and First Aid Crew and the Virginia Association of Rescue Squads will be co-hosts.

Scheduled for workshop discussion are: specialized first aid and resuscitation, aircraft disaster rescue, highway safety, heart emergencies, light and heavy duty rescue and underwater diving rescue and recovery. The International First Aid Contest will be held in the hotel ballroom November 4 at 3 P.M., and the International Rescue Contest will be held on the evening of November 3.

"But, Captain, I heard the Chief say we were to do some drilling."

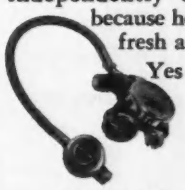


The Scott Air-Pak is the only good thing in smoke because it's the safest, most comfortable respiratory protection you can wear. It provides pure, cool, fresh air to satisfy your every breathing requirement. With a Scott Air-Pak there is no rebreathing of stale air . . . no regenerating process . . . no acrid chemicals!

The man wearing a Scott Air-Pak has confidence in his breathing safety. He does not worry about the oxygen content of the atmosphere he enters . . . or the percentage of toxic gas present. He breathes independently of surrounding atmospheres because he carries his own supply of pure fresh air.

Yes . . . the *BEST* thing in smoke is a Scott Air-Pak!

Scott Air-Pak with Scottoramic Mask.



Scott Pak-Alarm An Audio-Video Safety System for all Scott Air-Paks.

SINCE 1933
Scott
AVIATION CORPORATION
236 ERIE STREET • LANCASTER, NEW YORK

Export: Southern Oxygen Co., 3 West 57th Street, New York 19, N. Y.
Canada: Safety Supply Co., Toronto – Branches in Principal Cities

SCOTT AVIATION CORPORATION 236 Erie Street • Lancaster, New York

Please send me the following literature and prices:

☐ Scott Air-Pak brochure; 6-pages, 2-color.
☐ Scott Pak-Alarm Specification sheet.

NAME _____ TITLE _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

KUHN ..."LEADERS IN SPECIALIZED RECEIVING EQUIPMENT"

CRYSTAL CONTROLLED CONVERTERS

POLICE

FIRE

345A Complete $29.95

A new high gain Crystal Controlled Converter. Excellent sensitivity. . . . Rugged construction . . . Easy to install. Designed for standard transistor car radios. Requires no high voltage supply. 30–50 MC or 150–162 MC.

KUHN CONVERTERS... the most advanced line ... designed for optimum performance.

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Transistorized, directly Tunable Converter. Powered with self-contained mercury cell. Excellent sensitivity and stability. Designed for car, home or portable receivers. Two types available: Aircraft VHF 115–130 MC, or 150–162 MC.

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A new low cost Crystal Controlled Converter designed for use with standard transistor car radios. Operates directly from 12V DC. Rugged construction. Good sensitivity. Range 30–50 MC.

ORDER TODAY or SEND FOR FREE CATALOG . . . containing complete information on a full line of: CONVERTERS AND RECEIVERS FOR EVERY APPLICATION

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A low cost Tunable Converter for any 10 MC areas of: 30–50 MC or 150–160 MC. Easily installed. For use with home or auto sets.

318A Directly Tunable Converter. Available in two ranges: 30–50 MC or 150–160 MC. Complete $21.95

KUHN ELECTRONICS INC.

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BADGES

- Money Clips - Wallet Clips - All Badges - No Extra Charge
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- Sta-Brite the Lifetime Metal
- Superior Solid Badges

Write for Free 32-Page Catalog to Dept. F10

NIELSEN • RIONDA INC.

40 JOHN ST., NEW YORK 38, N. Y.

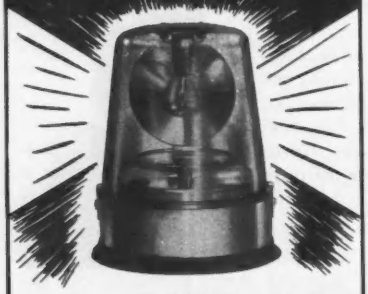
Box Warning!

A SPECIAL new emblem for fire alarm boxes is being manufactured by FD Products, 90–N1 Tracey Place, Englewood, New Jersey. Made on rubber saturated, weather and scuff-resistant stock, the emblem reads: "False Alarms Kill — Use This Box to Save Lives, Not to Injure, Maim or Kill."

Colors are fluorescent fire-red, black and white. The emblem can be placed on a fire alarm box by peeling off the backing and pressing the emblem with fingers. Any fire chief or fire official can obtain a free emblem and quantity costs by writing to the company.

MAGNA-VAC

Magnetic—Sticks Like Glue



New **360° Revolving WARNING LIGHT**

SELLING LIKE HOT CAKES!

No one can believe the price!

What a light! Plugs into cigarette lighter. Holds like grim death. Six magnets. Silent motor. Revolving reflector. 60 powerful flashes a minute. Red, blue, or amber dome. Ideal for wreckers, service cars, ambulances, volunteer fire and police at a price they can afford. 7" tall, 5" dia.

New SIRENS available

WRITE US TODAY!

TRIPPE MFG. CO., Dept. FN

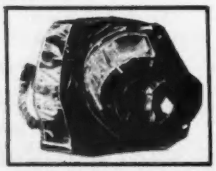
133 N. Jefferson St., Chicago 6, Ill.

NOW...*Fyrepel offers*

you complete heat protection with the *all new*

9148 OVERHOOD

- Aluminized Glass Cloth
- 180° arc of vision
- Fits secure and snug



The 9148 snaps quickly and easily on to the brim of any fire helmet—gives excellent radiant heat protection to face, neck, chest and shoulders. Breathing apparatus can be worn beneath hood. The face piece, frame and drape are all detachable for easy part replacement.

Write for details on Fyrepel's complete line of fire fighting clothing and equipment.

FYREPEL PRODUCTS INC.

NEWARK, O.

Chief Lambert Retires

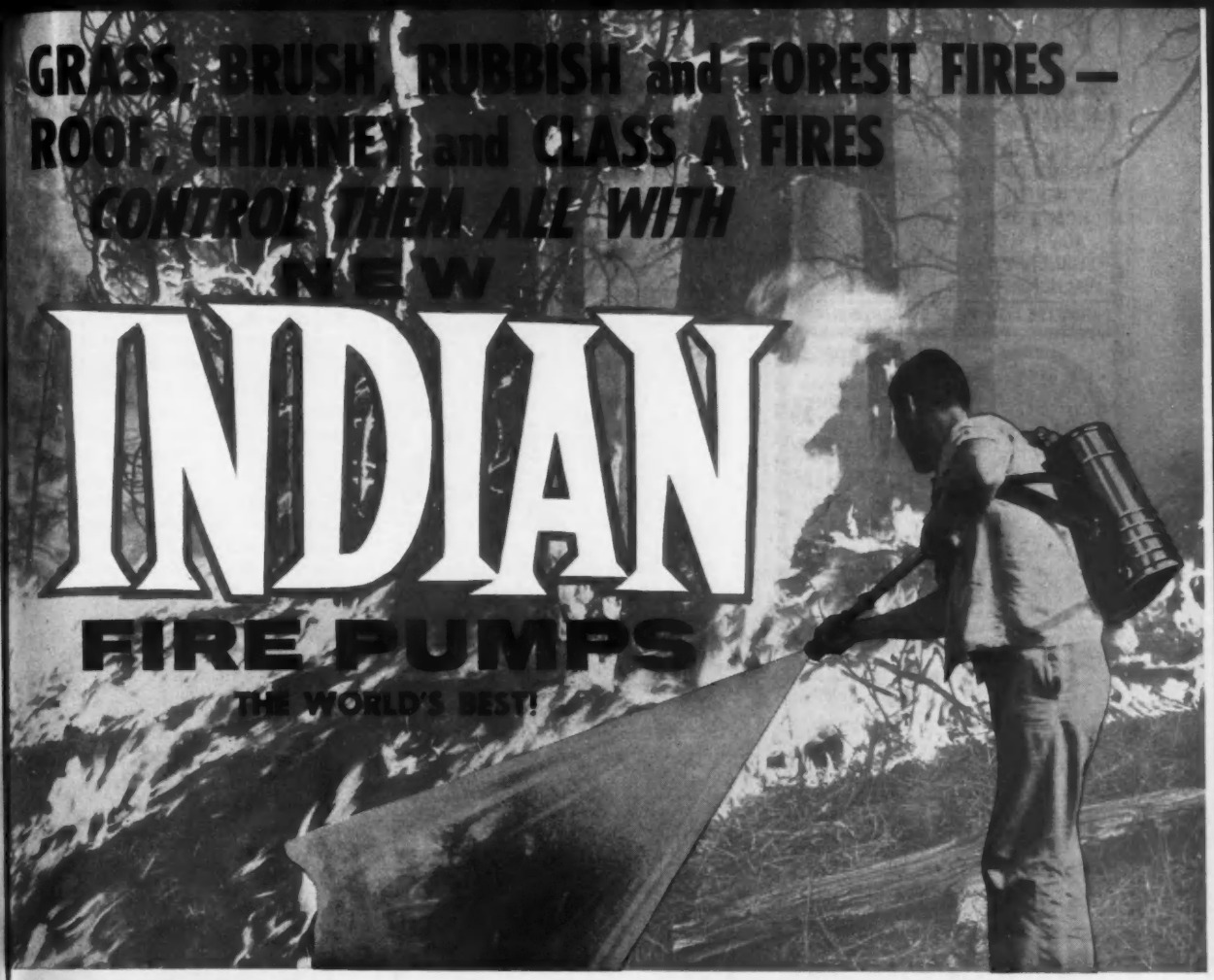
CHIEF W. M. Lambert, of the Brantford, Ontario, Fire Department, has retired from the department under the terms of the city's Municipal Pension Plan. Lambert joined the department 41 years ago, becoming lieutenant in 1939 and captain in 1940. He had been chief of the department since 1954.

New chief is Charles E. Townson, who joined the department in 1938. He was promoted to lieutenant in 1950 and became captain in 1959.

Question: What is the required test for the vacuum device on centrifugal pumps for fire department service?

Answer: See Paragraph 3226 of NFPA Standard No. 19, Specifications for Motor Fire Apparatus, 1960 edition.

GRASS, BRUSH, RUBBISH and FOREST FIRES—
ROOF, CHIMNEY and CLASS A FIRES
CONTROL THEM ALL WITH
NEW
INDIAN
FIRE PUMPS
THE WORLD'S BEST!



For over 30 years INDIAN FIRE PUMPS have put out small fires before they grow into big ones. Pumps on new models have been shortened to 18 inches. Telescope handle, however, extends pump as long as before. Shortened pump will not snag on brush and is more compact for nesting in trucks and storage. Brass tank models are highly popular. Will not rust or corrode.

No. 90 sliding pump type shown above. Available in Armco zinc grip steel, solid brass or chrome tanks.

No. 90 INDIAN FIRE PUMP
(Sliding Pump Type)

Send for circular on our new **No. 90 FIBERGLASS** tank model. Light weight. Will not rust or corrode. New, shorter brass pump.

No. 80 INDIAN FIRE PUMP
(Lever Type Pump and Handle)

Continuous high pressure. Pump throws strong stream or nozzle adjusts for spray or fog mist. Sturdily built to give many years of service.

All models of INDIAN FIRE PUMPS are approved by Factory Mutual.

D. B. SMITH & CO. "FOR 73 YEARS THE LEADERS" **408 Main St., Utica 2, N.Y.**

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FD RESCUE MARKERS

WILL HELP YOUR DEPT. TO "I"DENTIFY THE HOMES OF THE AGED, BLIND, BEDRIDDEN AND HANDICAPPED

YOUR TOWN U.S.A. I FIRE DEPARTMENT

WRITE FOR FREE SAMPLE KIT

MEMBER FD

FIREMEN —

Identify your car as an EMERGENCY VEHICLE with a

"DUAL GLOW" AUTO EMBLEM

"Reflective" at night —Extra Bright by day

4½" Diam.

2 for $1.00 — Send today for yours

FD PRODUCTS

Dept. F-26

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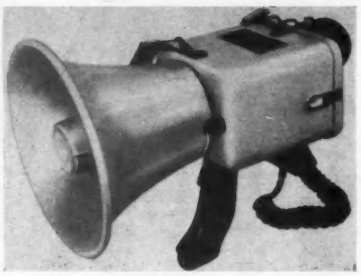
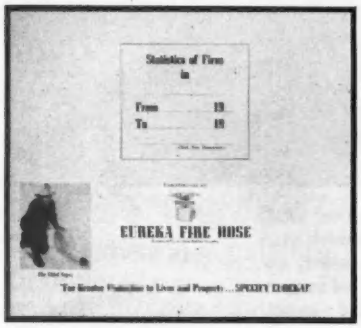
this month's *News and New Products*



New Super-Hailer Megaphone

Audio Equipment Company, Inc., P.O. Box 192, Port Washington, New York, introduces a new high-power, rugged duty megaphone for use as a one-piece portable voice amplifier. With mike detached, it may be shoulder slung or operated on remote extension cable. Get the facts from Audio.



Booklet for Fire Reporting

Eureka Fire Hose, Division of United States Rubber, 1 Market Street, Passaic, New Jersey, is distributing a booklet of daily fire report forms for fire departments. The 24-page, 12½- by 10½-inch booklet features nine 2-page sections divided into columns for the inclusion of important comments and statistics on fires. Each page is ruled for the reporting of at least 28 fire incidents.

●

John Weaver, President, announces that *Fyrepel Products, Inc.*, Newark, Ohio, has moved into their new plant No. 3. . . . Are you involved in the planning or use of emergency alerting or public warning devices? Get the new 16-page brochure on air horns, steam horns and accessories by *Clark-Cooper Division, Frederic B. Stevens, Inc.*, Palmyra, New Jersey. . . . Raymond T. Boomer becomes factory representative with headquarters in Fayetteville, Georgia, for the southeastern district for *Clifford B. Hannay & Son, Inc.*, Westerlo, New York. . . . Frank S. Drake is now Vice President of *Falcon Alarm Company, Inc.*, Summit, New Jersey, coordinator of national sales activity for all Falcon signaling devices. . . . A compact wool blanket that snuffs out flames when clothing is afire is described and illustrated in bulletin No. 0408–22 available from *Mine Safety Appliances Company*, 201 North Braddock Avenue, Pittsburgh 8, Pennsylvania.

●

ADT Compact Control Center

Pictured here is the ADT control center for proprietary installations to enable one man to supervise fire and security alarm protection for an entire plant. Notice closed circuit television and sound surveillance devices.

New Spark Arrestor for Trucks

A new stainless steel, vane-type spark arrestor for mobile and stationary internal combustion engines is now marketed by Air-Maze Corporation, 25000 Miles Road, Cleveland 28, Ohio. Forest, farm, and rural fire departments should look into this device.

●

Schultz's "A.P.T." tool is immediately available through *Rodger J. Apple*, 3 Hall Place, Albany 10, New York. . . . Rural area departments

should look into the Fire-Master slip-on pumper, a self-contained 200 gallon unit by *Fire Equipment, Inc.*, P.O. Box 107, Palmyra, New Jersey. . . . *Crouse-Hinds Company*, Syracuse 1, New York, has a new series of PAR-beam portable floodlights for apparatus and rescue equipment.

•

Firemen's Safety Hood by Globe

Globe Manufacturing Company, Pittsfield, New Hampshire, now offers a new aluminized fabric firemen's safety hood for close contact with intense heat and freedom of action. Write manufacturer for details.

BUYING NEW EQUIPMENT?

Consider the products advertised in this issue.

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DEALER TERRITORIES OPEN FOR

SCHULTZ'S A.P.T. Tool

NEW COMPACT TOOL WITH 27 USES!

We have a few open territories for Schultz's A.P.T. tool now proving so popular with squadmen, pipemen, laddermen, motor engineers and officers. Just show the A.P.T., use it and your sales are made!

Write

SCHULTZ'S A.P.T.

2601 Zinow Ave., Detroit 12, Mich.

FIREMEN!

INCREASE YOUR INCOME!

Convert your spare time into steady income selling most popular line of Belts and Buckles with Fireman's personal initials, first name or nickname with miniature replicas of actual fire equipment beautifully enameled, also lapels, tie clasps, key chains, money clips, and cuff links. Excellent repeat business. We furnish you with FREE complete sales kit. Really nice part-time money producing items.

NO INVESTMENT NECESSARY!

For full particulars, write to

HOOK-FAST SPECIALTIES, INC.

Factory — 16 Eudora St.

P.O. Box 1088F Providence, R. I.

EXTRA MONEY

Selling and Servicing fire equipment — part time

Start a business of your own on a shoestring.

Our complete line of fire protection equipment may be able to bring you those extra things in life that you have always wanted — plus give you a business of your own for security and income for you later in life.

If you are interested, send a letter giving your age, background, and ambitions to:

FIRE PROTECTION EQUIPMENT, INC.

933 Kansas Ave., Topeka, Kansas

FOR SALE

1958 SUPERIOR PONTIAC AMBULANCE

- Good Shape
- New Rubber
- Big Motor
- Low Mileage

MAKE OFFER

PIKESVILLE VOLUNTEER FIRE CO.

1212 Reisterstown Road

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"SPARKY" GIVE-AWAYS AND PRIZES

FOR YOUR FALL CAMPAIGNS

"Sparky" give-aways will brighten up your fall Fire Prevention campaigns in schools and fire stations:

Badges
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Dolls
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Tee Shirts
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SPECIAL QUANTITY DISCOUNTS

Write for Completely New Catalog!

ROBERTS CO.

BOX 444D WAYLAND, MASS.

New Fireman's Items!

PLASTIC RAIN PANTS

(goes over yours)

$2.98

Embroidered Attractive Sew-on Emblem	$1.00
Colorful Car Window Decal	75¢
4" Metal Car Emblem	$1.98
Tee-Shirt-F.D. Insignia (12 min.)	$1.50 each
Plastic Rain Jacket — zippered	$4.98
Garrison Cap Raincap — covers cap, neck, shoulders	$1.98
Attractive Chrome Tie Bar	$1.98

You must be 100% pleased or money back. Rush Order Now!

STADRI CO., Dept. FE, 147 6th Ave., Whitestone, N. Y.

For Sale

1947 FORD FIRE TRUCK

600 gallon tank capacity, front mounted Darley pump, 350 gpm. Ladders and hose included.

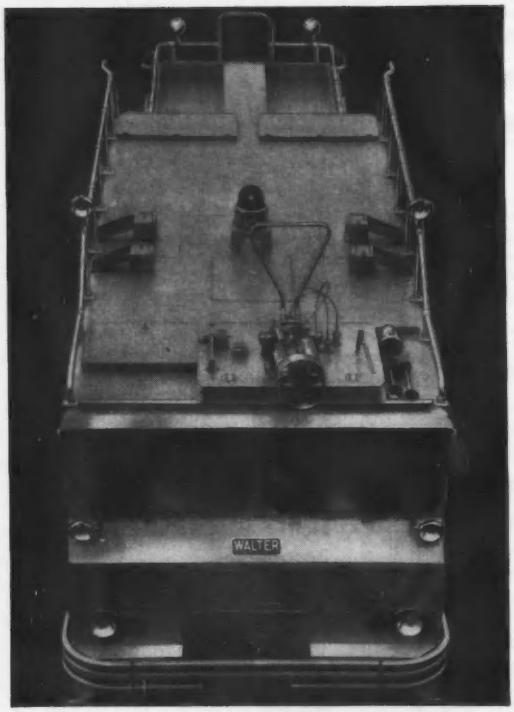
Contact

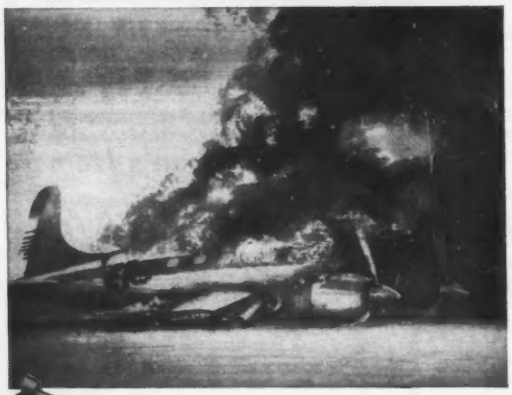
Leroy Fritz, Fire Chief

Phone: DElta 6-2425

Newport Township Vol. Fire Dept.

Wadsworth Rd., Wadsworth, Illinois





SPEED RESCUES AT CRASH FIRES!

Step up your department's life-saving power . . . equip with Rockwood FOAM systems, nozzles, FOAM liquid.

Rockwood equipment, selected for fast, flame-smothering rescue action at airport crash fires, brings the same powerful protection to municipalities, chemical plants, refineries and all industry. Rockwood makes the most complete line of turrets and nozzles, to handle solid FOAM stream, FogFOAM, WaterFOG and solid water stream. Make sure your own trucks are equipped for maximum safety of lives and property! For details on the complete Rockwood line write to Rockwood Sprinkler Company, Portable Fire Protection Department, 424 Harlow St., Worcester 5, Massachusetts.

ROCKWOOD SPRINKLER COMPANY

A Division of The Gamewell Company • A Subsidiary of E. W. Bliss Company

Engineers Water . . . to cut fire losses

Distributors in all principal cities

One of the largest, most effective Aircraft Rescue and Fire Fighting Vehicles is now in service at the Washington National Airport. Basic truck design is by the Walter Motor Truck Company. Fire fighting equipment specially designed by Rockwood includes: (1) 8000 GPM turret nozzle with hydraulic power control from within the cab or direct manual control from cab roof; (2) a ground sweep nozzle beneath the front bumper, which spreads a FOAM blanket to protect truck and crew; (3) nozzles for two handlines, discharging 600 GPM; (4) a FOAM proportioner for the pumping system. With Rockwood equipment, Rockwood FOAM liquid makes a powerful fire fighting combination.

This is how you measure

Dependability of a Mack gasoline or diesel engine

When it's 15° below and ice forms as the water hits, or whenever fire apparatus must face the extreme demands of fire fighting, that's the time to get the full measure of an apparatus' engine performance.

Does it start dependably . . . have the reserve power for the most grueling operations in any climate and terrain . . . pump hour after hour for as long as needed?

Thermodyne® engines that power Mack fire apparatus, both gasoline and diesel, meet every fire-fighting assigment because they've got the stamina that's made Thermodyne synonymous with dependable, powerful, high-output performance.

This is the stamina that stems from Mack engineering know-how and Mack's many powerplant advances—Everlasting timing gears . . . Durafaced valve lifters . . . full-length water jackets . . . and gear-driven air compressor.

Select your next fire apparatus and the engine that powers it to meet the most demanding assignment you'll ever face, and you'll specify Mack fire-fighting equipment powered by one of the world-famous Thermodyne engines. Mack Fire Apparatus, Allentown, Pennsylvania. Mack Trucks of Canada, Ltd., Toronto, Ontario.

7935

Mack offers three Thermodyne engines to best meet your requirements

Model ENF-707C Gasoline. Largest and most powerful of Mack-built Thermodyne fire apparatus engines, this 707 cu. in. powerplant develops 276 hp. High volumetric efficiency is achieved through opposite intake and exhaust porting and Mack's exclusive combustion chamber design.

Model ENF-540 Gasoline. For smaller apparatus and where the higher horsepower of the 707 cu. in. engine is not needed, Mack offers this 540 cu. in. engine which nevertheless delivers in excess of 200 hp at moderate rpm. It has all the design and engineering features that have made Thermodyne the first name for fire apparatus powerplants.

Model ENDT-673 Diesel. Already proved in millions of miles on the nation's highways, the famed Mack Thermodyne diesel engine is finding increased interest for fire apparatus where its many advantages make it the ideal powerplant. These advantages include: complete absence of an ignition system with its accompanying spark plug, breaker point and coil maintenance complications . . . fuel of lower flash point, hence a safer fuel . . . 24-volt electrical system for quicker, surer starts . . . high torque at low speeds . . . and, for departments where superior fuel economy is important, more work out of less fuel with a diesel engine. Developing 230 hp, the Turbocharged Thermodyne is finding new boosters among fire departments everywhere.

MACK FIRST NAME FOR **FIRE APPARATUS**

FIREMEN
60 BATTERYMARCH ST.
BOSTON 10, MASS., U. S. A.

Form 3547 Requested.

Something to do for '62!

Take a pen, now, and make a resolution for the coming year. It can go like this:

> RESOLVED: *That the officers and men in my fire department, for their own safety, will have access to the latest and best information available on fire protection, fire prevention, and fire control;*
>
> *That they will be assured of such information by receiving the publications which will come to the fire department through membership in the National Fire Protection Association;*
>
> *That the information supplied by those publications will be discussed by the officers and men and incorporated, when possible, in the fire department training and operations;*
>
> *That application for NFPA membership will be made before the last week in November of this year, specifying that membership is to begin on January 1, 1962.*

After you write this resolution, do something about it! It is not too early to plan how to make maximum use of NFPA membership for 1962. Find out how many officers and men would like to receive FIREMEN magazine each month. Add the cost of these subscriptions ($2.00 each) to the membership dues (see box at right). Type the list of names and addresses, fill out the application blank below, and send the list and blank to the NFPA.

The sooner you act on this, the better! Three quarters of the year 1961 is already history and the next year is approaching fast! It may be the most important, action-filled year your fire department will ever experience. Make sure that your officers and men are well informed concerning the massive problems created by fire.

Their lives may depend on what they can learn in 1962!

Application for Membership

NATIONAL FIRE PROTECTION ASSOCIATION O10
60 Batterymarch Street, Boston 10, Massachusetts

Gentlemen:
The fire department named below applies for NFPA membership. The names and addresses of men who are to receive FIREMEN magazine are attached.

Name of Fire Department.....

Address.....

City.....P.O. Zone.....State.....

☐ A check for.....is enclosed. ☐ Please bill me.

NFPA ANNUAL DUES

$15.00 Per Year

For municipal paid, call and volunteer fire departments four (4) subscriptions to FIREMEN magazine are included with membership, as well as subscriptions to the NFPA "Fire News" and the NFPA "Quarterly." A single free volume of the National Fire Codes can also be obtained.

Additional subscriptions to FIREMEN magazine cost only $2.00 each per year.

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SOCIATI

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